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World Silver Survey 2007

Produced for The Silver Institute
by GFMS Limited

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Table of Contents

This is the thirteenth annual survey of the world silver market to be produced for The Silver Institute by GFMS Limited, the London-based analysts of global precious metals markets. The information contained here is based in part on the analysis of the GFMS database of international trade statistics, company report data and other public-domain information. But more importantly, it is also based on a series of interviews with the industry's main players, carried out every year by the GFMS team of analysts and consultants, which provide the essential data to allow the compilation of reliable estimates for world supply and demand.

GFMS is grateful to the many miners, refiners, bullion dealers, bankers and fabricators throughout the world who have contributed their time and information to ensuring that the picture of the industry described in the *World Silver Survey* is as complete and accurate as possible.

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Units used:

supply and demand data are given in units of million troy ounces (Moz) rounded to one decimal place.
1 Moz = 31.103 t (metric tons)
1 ton = 32,151 troy ounces
1 ton = 1,000,000 grams (g)

Terminology:

"-" = not available or not applicable
0.0 = zero or less than 0.05
"dollar" refers to the US dollar unless otherwise stated.

Prices:

Unless otherwise stated, US dollar prices are for the London Silver Market fixing.

Table Rounding:

Throughout the tables and charts, totals may not add due to independent rounding.

1. Summary and Outlook

The new phase in the silver bullmarket that started in the fourth quarter of 2005 resulted in a dramatic rally in the price last year, its annual average climbing by no less than 58%. Equally remarkable is that the price has been sustained at such high levels since the ETF-driven peak of close to $15 was reached in May 2006. Although after this, silver like many other commodities at the time was sold-off sharply (in its case, briefly dipping below the $10 mark), its resilience since then has been impressive.

The higher trading range has to a large extent been supported by continued investor interest in the metal. Although the market has seen both buyers and sellers, as our relatively modest net implied investment number for 2006 indicates, sentiment has tended to remain overwhelmingly positive. This is evident from the stickiness of demand for the ETF itself, whose holdings have so far only occasionally fallen and then not by much. Besides its own appeal, silver has also benefited from commodities in general being in vogue and, in particular, its traditionally strong relationship with gold, which of course has also enjoyed a powerful investor-led rally.

Near the top of the list of the other reasons as to why silver has remained so strong is the lack of a supply response to the jump in prices. Total supply, in fact, contracted by 1.5% last year. Following a sizable increase in 2005, mine production was little changed in 2006, while scrap only rose at the margin, the latter very much due to ongoing reductions in the quantity of recycled photographic silver. Meanwhile, the lift in government sales was more than offset by producers collectively abstaining from hedging, in spite of the very high forward prices available at times last year.

Likewise, as the data below indicates, fabrication also showed a very tiny overall response to the average price reaching a 26-year high; total fabrication fell by a mere 0.9%. Indeed, its largest component, industrial uses, actually rose by 6%, illustrating how this area of demand has little short-term price sensitivity and is driven instead by external factors such as technology and the level of industrial production. Although the high price did have an impact on jewelry and silverware demand, this turned out to be very modest. For instance, looking in isolation at

Table 1 - World Silver Supply and Demand (million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Supply										
Mine Production	520.0	542.1	556.8	590.9	606.2	593.8	600.7	622.2	645.7	646.1
Net Government Sales	-	33.5	97.2	60.3	63.0	59.2	88.7	61.9	65.9	77.7
Old Silver Scrap	169.3	193.9	181.6	180.7	182.7	187.5	184.0	181.5	186.4	188.0
Producer Hedging	68.1	6.5	-	-	18.9	-	-	9.6	27.6	-
Implied Net Disinvestment	78.9	45.2	42.0	83.5	-	8.3	-	-	-	-
Total Supply	**836.3**	**821.2**	**877.5**	**915.4**	**870.8**	**848.7**	**873.4**	**875.2**	**925.6**	**911.8**
Demand										
Fabrication										
Industrial Applications	319.5	313.2	336.1	371.3	332.4	336.5	346.8	364.2	405.8	430.0
Photography	217.4	225.4	227.9	218.3	213.1	204.3	192.9	181.0	162.1	145.8
Jewelry	150.6	140.6	159.8	170.6	174.3	168.9	179.2	174.8	173.8	165.8
Silverware	117.7	114.2	108.6	95.6	105.2	82.6	83.0	66.2	66.6	59.1
Coins & Medals	30.4	27.8	29.1	32.1	30.5	31.6	35.6	42.4	40.0	39.8
Total Fabrication	835.6	821.2	861.5	888.0	855.4	823.9	837.4	828.6	848.3	840.5
Net Government Purchases	0.7	-	-	-	-	-	-	-	-	-
Producer De-Hedging	-	-	16.0	27.4	-	24.8	20.9	-	-	6.8
Implied Net Investment	-	-	-	-	15.4	-	15.0	46.6	77.2	64.5
Total Demand	**836.3**	**821.2**	**877.5**	**915.4**	**870.8**	**848.7**	**873.4**	**875.2**	**925.6**	**911.8**
Silver Price (London US$/oz)	4.897	5.544	5.220	4.951	4.370	4.599	4.879	6.658	7.312	11.549

jewelry, silver's drop of less than 5% was trivial compared to the 16% hit taken by gold on the back of a more modest 36% rise in its average price. Finally, the 10% decline for photography had relatively little to do with price, instead once again reflecting losses due to digital technology, particularly in the consumer film area.

Looking ahead, demand is likely to remain relatively untroubled by prices within a $11-$14 range. Although there is pressure for substitution in certain industrial end-uses the impact of this will not be felt in the short to medium term. But with industrial uses now accounting for over 50% of fabrication, silver is vulnerable to any major setback in global industrial production. In 2007, jewelry and silverware demand ought to remain fairly robust unless prices reach new highs, if only because much of the volume loss in the key Indian market, due to price and other factors, is behind us. Photographic demand will fall further in 2007 but the drop in volume, as opposed to percentage, terms should moderate.

On the supply side, mine production is forecast to grow by around 3% or 20 Moz (620 t), which is an insufficiently large rise to have any real impact on prices. Moreover, government sales could well drop by at least a similar order of magnitude, as the Indian program has now been completed. Scrap supply is also likely to decrease unless prices rise substantially from current levels. Overall, therefore, supply could well contract again in 2007.

In conclusion, the fundamental supply/demand picture, although by no means sufficient to drive silver higher, is nowadays at least supportive of prices well into double-digits, in the absence that is of a major externally-driven setback to industrial demand.

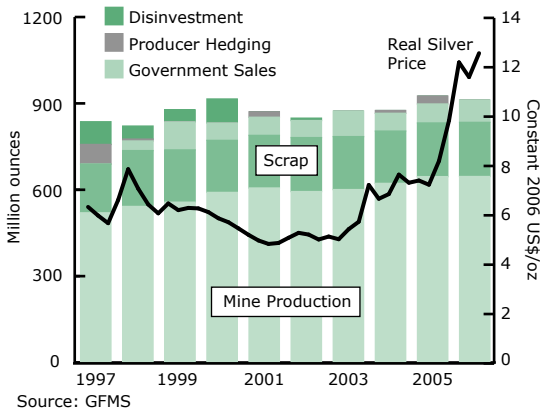
For silver to break out to the upside or downside would therefore seem to require intervention from investors. In terms of the downside, this could occur if a slide in global GDP growth prompted investors to liquidate their positions. A related sell off at this point in base metals would only add fuel to the fire. On the other hand, at the present time, investors still look set to expand their investments in commodities. Gold, for instance, is expected to be driven higher via fresh investment demand before this year is over. Silver is unlikely to be left behind were such a scenario to materialize.

Supply

- ***Mine production in 2006 edged fractionally higher to 646.1 Moz (20,095 t) as growth in Latin America was erased by a severe drop in Australian output.***
- ***An increase in Russian sales coupled with the persistence of Indian disposals led to an 18% rise in global government sales of silver bullion.***
- ***Scrap supply grew by less then 1% to 188.0 Moz (5,848 t), despite the 58% rise in the silver price.***

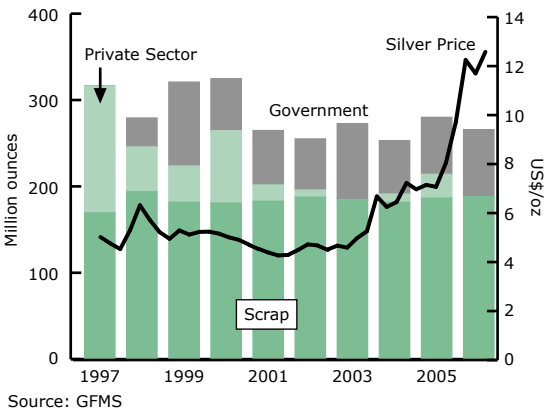
Global silver **mine supply** totaled 646.1 Moz (20,095 t) in 2006 representing a very restrained annual increase of 0.4 Moz (13 t). In spite of strong increases in Peru, China, Chile and Mexico, a calamitous outcome for Australia, where production tumbled 21.7 Moz (676 t), and a cut to Canadian output eliminated much of the global growth. Australia's sharper than forecast fall, which accounted for close to two-thirds of the gross global decline, was chiefly linked to events at Cannington, formerly the world's largest silver operation. Rehabilitation work requiring the downscaling of activities

World Silver Supply



Source: GFMS

Mobilization of Above-Ground Stocks



Source: GFMS

between May and November 2006 led to a reported 37% reduction in silver output at the mine. Elsewhere, a sharp fall was noted at the Eskay Creek gold mine in Canada, which is set to close in 2008 and which accounted for a significant portion of the country's losses.

Looking at production in terms of source metal, primary silver production dropped by 10% year-on-year, to account for just 25% of global silver mine supply. As above, this reduction was closely related to declines at Cannington and, to a lesser extent, Polymetal's Dukat mine in Russia. Countering this fall, production of silver as a by-product of lead/zinc, gold and copper all increased. With respect to lead/zinc mining, where silver production increased by 4%, a more than doubling of silver output at Colquijirca and increased silver recoveries in China were the principal drivers. For gold, the start or ramp up of a number of Mexican doré producing mines, coupled with higher silver grades at La Coipa in Chile, were significant contributors.

Net government sales in 2006 rose by 18% to reach 77.7 Moz (2,415 t). The increase was primarily the product of marked growth in Russian sales, coupled with the ongoing releases from Indian government silver stocks. Elsewhere, a decline in sales from China partly offset these increases. A handful of countries accounted for the small remaining balance.

Global **scrap** supply remained broadly unchanged in 2006, increasing by less then 1% to 188.0 Moz (5,848 t). The ongoing decline of recoverable silver from photographic applications was offset last year by volumes coming from the other main sources of supply, namely the industrial sector and the jewelry industry, with the increased silver price the catalyst for much of the rise. The price surge had a significant impact on price sensitive markets, with India dominating this sector with a 40% increase in scrap supply last year. European scrap, typically more price inelastic, also saw areas of growth as many jewelry and silverware fabricators were obliged by the price increase to remelt unsold inventory to ease credit lines or assist cash flow.

However, there were some developments that partially offset the rises in jewelry and industrial scrap, notably a reduction in the recycling of ethylene oxide (EO) catalysts in the United States, as well as a significant decline in Germany's coin melt.

Demand

- ***Total fabrication in 2006 reached 840.5 Moz (26,142 t), down only 0.9% despite the price rise.***
- ***Industrial offtake saw a fifth consecutive year of growth to a new record of 430.0 Moz (13,375 t).***
- ***Jewelry demand fell 5% to a seven-year low of 165.8 Moz (5,156 t), chiefly through higher prices.***
- ***Silverware offtake slumped 11% to 59.1 Moz (1,838 t) as prices exacerbated structural factors.***
- ***Lower production of consumer film was the principal cause of the 10% fall in photography.***
- ***Coin fabrication fell by 1%, largely due to lower minting in Europe.***
- ***The delta-adjusted silver hedge book at end-2006 stood at a measured 82.0 Moz (2,549 t), an 8% decline from the revised position at end-2005.***
- ***Implied net investment fell by 17% to reach 64.5 Moz (2,006 t) in 2006.***

Total fabrication slipped by less than 1% in 2006 as heavy losses in many areas were countered by strong gains in industrial uses. This highlights the benefits of robust global GDP growth and how inelastic industrial offtake is in the short term. The slump in photographic demand, however, was due more to structural factors than the price and silverware's marked fall was also partly due to structural issues. It was really only jewelry's losses that can be more fully blamed on prices.

Last year, total **industrial** offtake grew for a fifth year in succession, up 6% to a record 430.0 Moz (13,375 t). Impressive as this growth was, it marked a notable slowdown from the 11% rise recorded in 2005. However, this was overwhelmingly due just to India, whose growth slumped from 59% in 2005 to just 1% in 2006 as a result of weakness in quasi-industrial areas such as jari (in fact, if one excludes India from the total, global industrial demand grew at a 7% rate in both years). There was little slowdown in 'true' industrial uses and indeed the global electronics and electrical sector saw growth of 7%. This highlights how hard it has proved for industry to substitute silver or minimize its use in the face of rising prices. Offtake here was given a strong boost from booming demand for consumer electronics goods, such as flat screen televisions. However, most end uses saw higher consumption, whether in traditional bulk areas, such as the automotive industry, or new booming niches, such as photo voltaic cells. Growth in the construction

industry was important for the rise in brazing alloy and solder demand, which rose by 5%. By region, East Asia, mainly Japan and China, accounted for the bulk of total industrial demand growth, though US gains were also impressive. The rise in Europe was more muted, largely as a result of capacity transfers to East Asia.

Global **jewelry** fabrication fell 5% in 2006 to 165.8 Moz (5,156 t). Much was due to India's 28% slump stemming from higher prices. Other countries also saw large losses (for example Italy and Mexico, respectively down 11% and 14%). However, these declines were more a function of market share loss in exports to western Europe and North America. The winners here were mainly China and Indonesia, with respective fabrication gains of 16% and 18%. Jewelry consumption in western markets may have continued to grow (thanks to factors such as heavy brand promotion), if at a slower pace than before (due to such drivers as a shift to gemset).

Most regions contributed to **silverware** offtake's 11% drop in 2006 to 59.1 Moz (1,838 t), though around 60% of gross losses were due to just India, where demand was hit mainly by the price rise. Western markets were affected by the ongoing taste shift away from traditional heavy pieces, though fabricators there were also hit by export competition from China, whose fabrication rose.

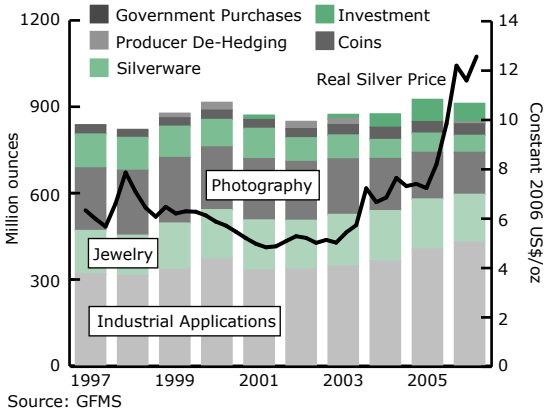
The 10% fall in **photographic** demand in 2006 to 145.8 Moz (4,535 t) marked the second year in succession that this category has experienced a double-digit fall. As in recent years, the attrition was concentrated in the consumer division, which continued to lose market share to digital products. This outcome contrasted with the performance in both the paper and medical sectors where the use of silver was little changed on 2005.

Last year, **coin** fabrication slipped by a little under 1% to 39.8 Moz (1,237 t). This outcome was due to a combination of notably higher minting across much of North America, which only partly offset lower fabrication in Europe.

A slow down in **producer hedging** activities was evidenced by a 6.8 Moz (211 t) cut in the global silver hedge book, which left producers' outstanding commitments on a delta-adjusted basis at end-December at 82.0 Moz (2,549 t), an 8% decline year-on-year. At first glance, it was perhaps surprising that the 58% rise in the average spot price did not do more to stimulate fresh hedging. Part of the explanation was a continued shift in hedging practices, which has seen a number of producers lock in silver prices using silver purchase agreements rather than the forward market. This was compounded by a more modest contribution from new project hedging and higher price volatility, which left some players in two minds as to the wisdom of locking in prices that could be under water in a relatively short space of time.

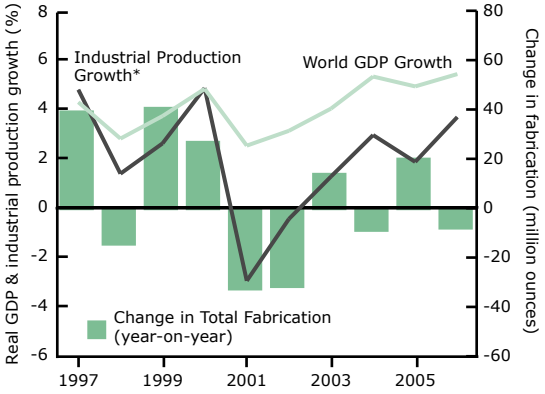
Finally, **implied net investment** reached 64.5 Moz (2,006 t) in 2006, down 17% on the previous year's level. The figure was the product of the 121.1 Moz (3,768 t) net inflow into the silver ETF and smaller contributions from net buying on the OTC market and in physical metal, offset by a dramatic reduction in speculators' positions in silver futures. Although short-term investor activity tended to follow movements in the gold price over much of the year, it is interesting to note that during the first four months, expectations of and, eventually, the launch of the first silver ETF gave an additional boost to silver investment demand and was the principal driver of the rise to the 26-year high of $14.94 on May 12th.

World Silver Demand



Source: GFMS

Fabrication Demand and World Economic Indicators



* Industrial countries only; Source: IMF, GFMS

2. Silver Prices

- ***The silver price averaged $11.55 in 2006, up a dramatic 58% on 2005 and a 26-year high.***

- ***Investment was the prime driver of the rally, though restraint in many areas of supply and relatively stable fabrication also assisted.***

Silver prices saw a marked rise in 2006, with the annual average, $11.55, the highest in any year bar 1980's $20.98. The year-on-year rise in the average, a leap of 58%, was also strong compared to the other precious metals (gold rose 36% and platinum 27%, while palladium was just greater at plus 59%). Changes within the year were similarly dramatic as the surge in the price during April and May led to a 25-year high of $14.94 being posted on May 12th. A major slump immediately followed that but subsequent gains still enabled a sizeable 43% intra-year price rise to be achieved.

Investment was the prime driver of overall gains, with the launch of the exchange traded fund (ETF) on April 28th to the fore of this. The ETF was also the chief force behind the April/May rally in the price (and lease rates). The fundamentals, however, were still important overall as the flat response of mine production and scrap took pressure off the market while the fall in fabrication being kept to less than 1% meant decent foundations. The relatively illiquid nature of silver no doubt contributed to its gains being greater than gold's but the yellow metal's differing response to a bull market (its fabrication fell by 11% and scrap rose by 25%) must also have been significant.

In addition to the above-mentioned second quarter spike, two further notable rallies and corrections featured later in 2006. Indeed, there was no period last year in which silver prices could be meaningfully described as rangebound; silver very much living up to its nickname of 'the restless metal'. As a result, it was not at all surprising that price volatility should shoot up, almost doubling from 2005's 24% to 45%. The trading range, also jumped, from 2005's already elevated 39% to 53%. Within the year, as might be expected, price volatility was greatest in the second quarter at 69%, whereas the least volatile was the fourth at just under 28%.

US$ Silver Price

	1976	1986	1996	2006
Annual Average	4.353	5.465	5.199	11.549
Maximum	5.084	6.310	5.828	14.940
Minimum	3.830	4.853	4.710	8.830
Range:Average	28.8%	26.7%	21.5%	52.9%

Source: GFMS

The Silver Price in Other Currencies in 2006

	€/kg	Rupee/kg	¥/10g	Yuan/kg
Annual Average	295.1	17,843	431.6	2,958
Maximum	373.9	22,950	540.8	3,846
Minimum	233.6	12,740	325.4	2,290
Range:Average	47.5%	57.2%	49.9%	52.6%

Source: GFMS

London Silver Market: Spot Price

US$/oz; other currencies reindexed to 3rd January 2006

Source: GFMS

Prices in other currencies showed similar changes to the dollar price in 2006. Importantly, the rupee price rose a slightly faster 61%. This was in contrast to 2005 when rupee price gains undershot the dollar price rise. The significance of this is implied in that, while in 2005 world fabrication rose by 2% and Indian demand outpaced it at plus 32%, the reverse was true in 2006 - global fabrication slipped by 1% but Indian offtake fell by 10%. Several producing countries saw similar gains to US dollar prices, with average local prices in Peru, Mexico and Australia respectively up 57%, 58% and 60%.

On the basis of real prices, last year's gains remain impressive; a return to 1987 is required to see a higher annual average though 2006's $11.55 was some way under 1980's inflation adjusted $51.34. A real price analysis also offers an insight into the long term sustainability of current levels. Last year's average was below the 1973-2006 real average of $12.43 and that period saw a run of 11 consecutive years with an average over $15. However, from the end of World War II through to 1972 (before the 1973 oil shock), real annual averages were largely confined to a $6-$10 range and the entire period from 1989 to 2005 saw single digit price averages.

Lease rates saw a dramatic rise in anticipation of, and for a while after, the launch of the ETF. The 3-month rate, for example, rose then by nearly a factor of ten to around 5%. However, as fears over an ETF driven evaporation of liquidity eased and precautionary borrowing unwound, lease rates returned to earth, with the 3-month rate back under 1% by August. This still meant, however, that annual average lease rates in 2006 were sharply higher than in 2005, particularly at the shorter end.

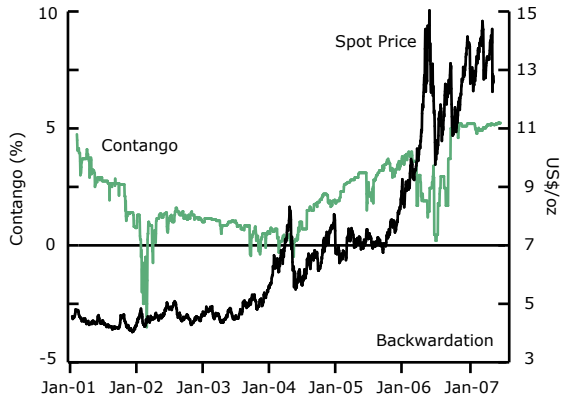
Market Analysis

Price developments in 2006 remained dominated by investors, both the overall upward trend and day to day moves. High levels of investor activity are certainly implied by the restlessness of the silver price. It also hints at the emergence of activity on both the buy and sell sides, itself a marked change from 2005 when investment was overwhelmingly buyside. This helps explain why our implied net investment figure for last year was somewhat lower than in 2005.

A review of the investment detail last year has to begin with by far the most important development, the launch of the first silver ETF on April 28th. The market in 2005 had already shown great sensitivity to rumors of an ETF and this became more heightened in the early months of 2006 as the probability of an ETF actually occurring grew. This was particularly the case in the light of the year beginning with a belief in some quarters that regulatory approval would *not* be granted given concerns over the fund's impact on liquidity.

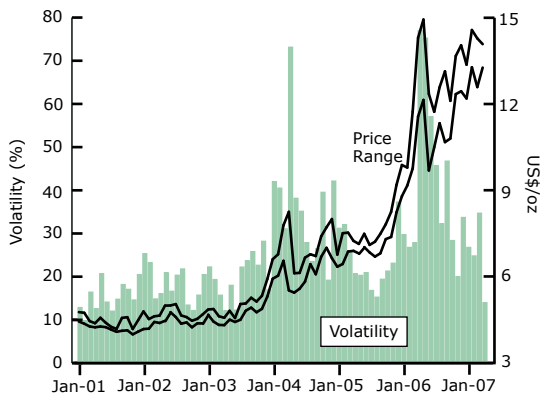
The growing chance of the product flying and then the approach of the launch triggered a wave of anticipatory covering in two main forms. Firstly, investors showed great interest in taking a position in silver during the first four months, primarily doing so via the over-the-counter (OTC) market, in order to take advantage of an expected explosion in the price as and when the ETF started trading. Secondly, industrial users were keen to secure cover, again in the event of a price rally, though much of this featured as precautionary borrowing - a key cause of the strong rally in lease rates in early 2006.

London Spot Price and 3-month Contango



Source: GFMS

Daily Silver Price Volatility



Source: GFMS

As prices sailed through $14 on April 19th, the old adage of 'buy the rumor, sell the fact' must have been prominent in investors' minds and that looked to be coming true when, two days later, a slump to almost $12 took place. However, the market quickly recovered its composure, rallying to fresh highs shortly after the ETF's launch. The buying of around 65 Moz (2,000 t) of silver in just two weeks from launch was clearly key to the price rise from April 28th's $12.555 to the $14.940 high of May 12th. However, it would be wrong to see the correction that followed, taking the price under $10 in mid-June, as any kind of failure by the ETF. In fact, its holdings proved remarkably resilient during this downturn and, from then to year-end, these largely stuck to a one way street of steady growth, providing solid, background price support.

That prices behaved more independently of the ETF over the rest of the year is testament to the volumes being traded in other arenas, such as the OTC market. This is understood to have seen buying early in the year linked to the expected impact of the ETF on market liquidity. Some of this OTC silver looks to have been swapped into the ETF soon after launch. However, far more OTC players look to have actively sold out in April and May, believing that prices could not be sustained and this was instrumental in May/June's brutal $5 correction. The third main area of investment, the Comex, also contributed to that price slump. However, overall Comex behavior was different in that the net non-commercial and non-reportable long position saw a marked, steady slide over almost all of the first half of the year. (In fact for the full year, the fall in this net 'fund' long could have very roughly matched the rise in ETF holdings in physical terms.)

Volatility (US$ Price)

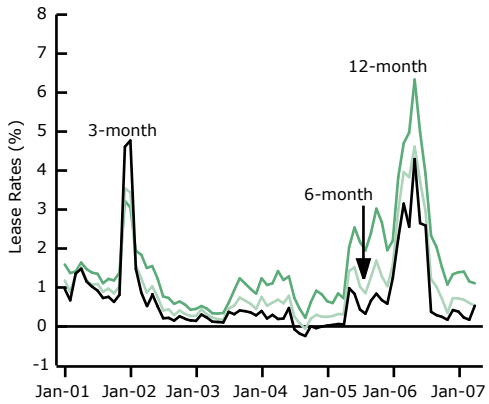
	2003	2004	2005	2006
Actual - 1 year	20%	39%	24%	45%
Implied - 1 month	22%	34%	25%	40%
Implied - 3 months	21%	33%	26%	40%
Implied - 1 year	19%	30%	26%	39%

**implied statistics annual averages, source: UBS*

From the mid-June low, silver rallied to back over $13 by early September. This was chiefly a function of strength in other markets, such as gold and the base metals. Such overspills were not of course confined to this period - they were significant throughout the year. This is reflective of ongoing broader investment in commodities in general, such as in commodity basket products, and which added background support. It was of note, however, that, when interest in the silver ETF was at its height, silver prices arguably seemed to lead gold, rather than the norm of the yellow metal being the independent variable. Despite this apparent high degree of linkage with gold, there was, however, little evidence of sizeable price ratio trading.

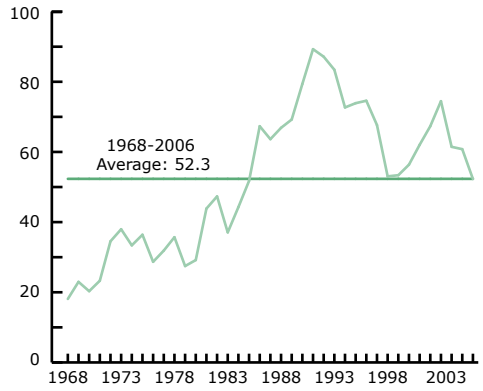
Early September saw a more than $2 slump in the price, a change that in any other year might have received great attention but in 2006 was largely overshadowed by the April/May spike. This once more was primarily driven by investors reacting to changes in other markets, such as a slide in the gold price and weakness in copper. Another background issue to consider is that as liquidity concerns relating to the ETF (and lease rates) eased over the course of the year, this triggered some long liquidation, primarily in the OTC market.

Silver Leasing Rates



Source: GFMS

The Gold / Silver Price Ratio



Source: GFMS

The fourth quarter saw the return of strength to the silver market, once more largely derived from rallies in gold and the base metals (in particular lead and zinc) plus dollar weakness. The period was of note in that it was the first time in 2006 that the net 'fund' long on Comex showed shown sustained growth.

The fourth quarter is also believed to have seen stronger buying in the physical markets. Indian bullion imports, for example, having been non-existent through to August, re-started in September before coming back to life strongly in October. Throughout the year, physical offtake was frequently said to have died in the heat of rallies and then been revived as prices retreated. However, it does appear that the fuller restoration of buyers' confidence after the May spike had to wait until the fourth quarter.

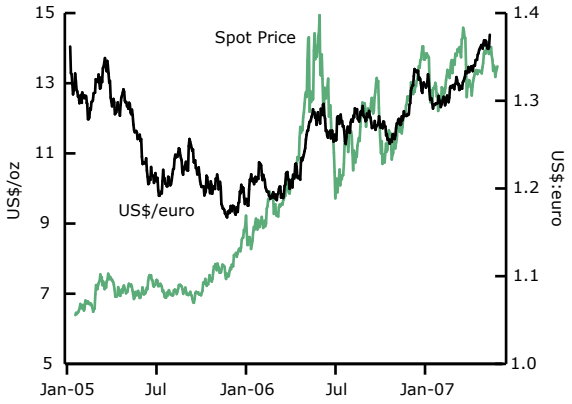
The comparative resilience of fabrication (it fell less than 1% in 2006) in the face of higher prices was also important in providing good foundations to the market throughout the year, with the bulk of this support coming from industrial uses. However, it would be wrong to assume there was no price response. Jewelry and silverware were damaged by higher and more volatile prices, their combined offtake falling by 6%. The impact of prices within the year can also be seen in Italian bullion imports, which fell by 50% year-on-year in the second quarter yet rose by 79% in the fourth. Losses in photography were, in contrast, far more a product of structural losses to digital technology than the price rise.

As well as fabrication holding up well, prices were also aided by the absence of an overall supply shock (the total fell by 1.5% in 2006). Mine supply, for example, can arguably be treated as price-neutral in 2006. As the year progressed, it became apparent that initial expectations of higher output would not come to pass. However, any price boost that might have had would have been largely countered by market participants starting to look ahead to 2007 and beyond and a forecast notable rise in production. Some price support, however, materialized in the form of a decent sized swing of almost 35 Moz (just over 1,000 t) in producer hedging. After comparatively high net hedging in 2005, modest net de-hedging appeared in 2006, with there being little repeat of earlier project related activity, some majors choosing not to hedge and others exploring non-hedging avenues of price protection. It would be wrong, however, to ascribe the swing to a move to the assertive de-hedging seen in gold.

A fair part of the cut to supply from the hedging swing, however, was countered by a rise in net government sales, only a portion of which could be said to be opportunistically price-related. Perhaps the most evident from a market perspective was that by the Indian government. This had a clear, direct impact on bullion demand as it helped negate the need for bullion imports into India from January to August last year.

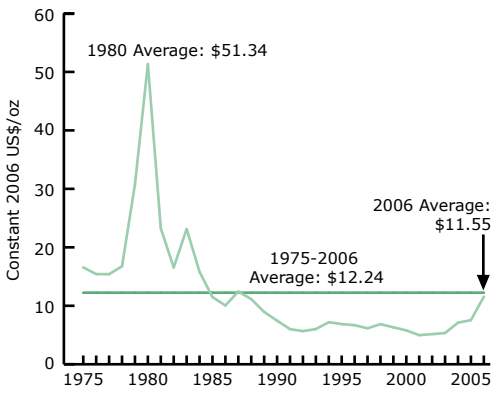
The final key factor behind supply stability was scrap inching up less than 1%, in comparison to the 25% jump for gold scrap. This mainly reflected the decline in photographic scrap, as that sector succumbs to digital inroads, and the largely inelastic nature of industrial scrap. This is not to say there was no price response; in those countries dominated by jewelry and silverware sharp rises were recorded. India and Italy, for example, saw respective gains of 40% and 20% in total scrap.

The Silver Price and the US Dollar



Source: GFMS

Real Silver Prices



Source: GFMS

Silver and Other Commodity Prices

The historically strong link between the silver price and that of gold remained in place throughout 2006. As GFMS have often argued, this link is largely fueled by investors treating silver on the back of gold, due to it being a member of the precious metals complex. Indeed, analysis of publicly available data as well as information GFMS have collected through field research confirm that, over the better part of the year, investors' daily trading in silver mirrored activity and expectations on gold.

The one short-lived exception to the rule appeared in the period just before the launch of the silver ETF. At that stage, the direction of causality seems to have changed, with gold instead benefiting from the attention the precious metals complex received due to the imminent launch of the new silver-linked product.

One indication of the strong link maintained between gold and silver prices in 2006 was the correlation coefficients between the two calculated over the year. The quarterly figures presented in the accompanying table vary between 0.54 and 0.64, while the annual figure is calculated at 0.60. Moreover, if one were to look at the correlation coefficient using log-returns in five-day moving averages (so as to remove some of the noise inherent in daily data and focus on the weekly trends), the third quarter coefficient tops 0.82, while the one over the full year is calculated at 0.76.

Although the influence of the gold price on the silver one is undeniable, the yellow metal is by no means the sole driver of silver price movements. In fact, there is a school of thought that argues that, on the basis of silver's largely industrial demand fundamentals, its price ought to be more closely correlated to base metals prices. This theory has a sound theoretical basis and, as one can see in the table below, the correlation between silver and base metals prices is indeed substantial. Nevertheless, over time the metal's link with gold is generally stronger. This is apparent in the data presented in the table as well as the two charts below.

Correlations of Changes in Daily Prices

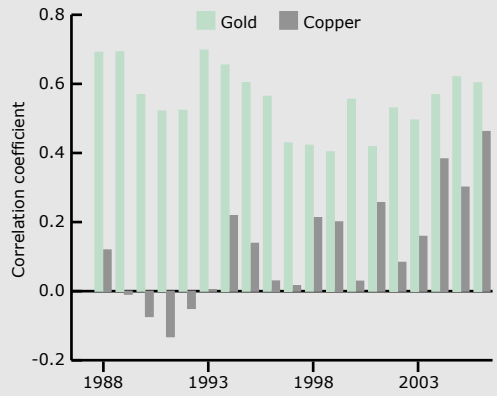
(using log-returns in spot prices)

	2006 Q1	2006 Q2	2006 Q3	2006 Q4	2007 Q1
Gold	0.61	0.64	0.61	0.54	0.62
Copper	0.41	0.48	0.59	0.28	0.59
Zinc	0.49	0.46	0.62	0.24	0.57
Lead	0.36	0.18	0.47	0.31	0.43
Oil (WTI)	0.05	0.19	0.30	0.07	0.11
GSCI	0.08	0.24	0.24	0.08	0.16
CRB	0.19	0.50	0.34	-0.02	0.13

Source: GFMS, Reuters

With regards to the influence of other commodities on the silver price, there is little evidence to suggest a direct link is in place. Although the increased attention the complex has received in recent years has certainly benefited silver, the correlation coefficients calculated between the price of the white metal and those of energy commodities, as well as the main commodity indices, generally fail to come close to those with gold or even base metals prices. This norm was somewhat broken in the second quarter of last year, when the whole commodities complex saw aggressive buying by the speculator community, which was followed by a major bail-out soon after.

Correlation of Silver with Gold and Copper Prices



Source: GFMS, Reuters EcoWin

Gold, Silver and Copper Prices

Source: Reuters EcoWin

3. Investment

- ***Investment demand, largely related to the launch of the first silver ETF in April, was the main driver of the 58% rise in the silver price in 2006.***

- ***Over much of the rest of the year, investor activity in silver followed a similar trend to that in gold and this pattern has continued in 2007 to-date.***

Overview

In recent years, investment demand has consistently been the main driver of fluctuations in the silver price and last year was no exception. Moreover, 2006 was noteworthy in that, during the first few months of the year, in the run-up to and the immediate aftermath of the launch of the silver exchange traded fund (ETF) in late April, an impressive inflow of funds into silver brought about a radical and potentially long-term change to the metal's price environment. This has moved the trading range for the metal to markedly higher levels which have been largely maintained through to the present time.

In addition, as a result of this investor inflow, silver price movements in the first four months of 2006 to some extent broke with the pattern established in previous years, during which the fate of the silver price had been mainly determined by that of gold. Although gold price developments still had an impact during the period in question, at the same time there was a gradual divergence between the two metals. This is clearly illustrated in the chart below, which features indexed gold and silver prices from the beginning of 2005. It is finally worth mentioning that, at the margin, the other precious metals, including gold itself, received some support from the attention the complex enjoyed due to the positive news surrounding silver in the first third of 2006.

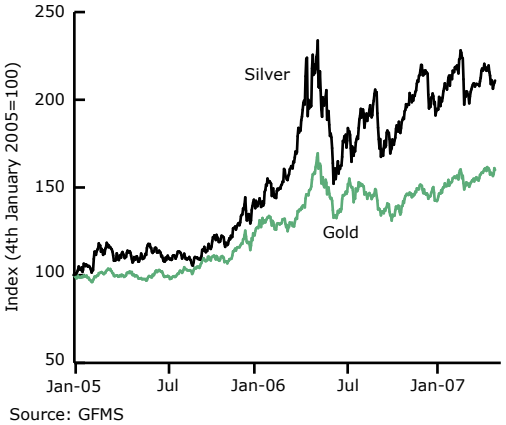
Silver Price and Investment Indicators

	2005 Average	2006 Average	Change y-o-y
Silver Price $/oz	7.312	11.549	58%
Contango (3-mth annualized)	3.10%	3.51%	n/a
US$ Libor (3-mth annualized)	3.57%	5.20%	n/a
S&P 500 Index	1,207	1,310	9%
CRB Index	295	334	13%
XAU Index	99	140	42%
World GDP Growth*	4.9%	5.4%	n/a
Advanced Countries Consumer Inflation*	1.9%	1.9%	n/a

*Annual rates; Source: IMF World Economic Outlook, April 2007; GFMS

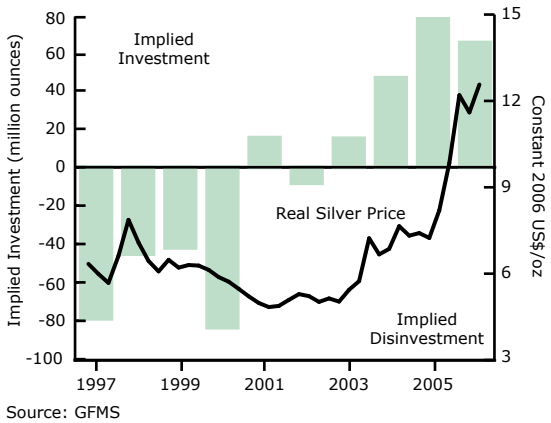
The run-up to the launch of the silver ETF saw tremendous speculative demand for silver on the back of expectations that huge interest in the ETF would drive prices to historical highs and also enable existing longs to comfortably exit their positions. This meant that once the new product actually started trading *net* investor buying of the metal was limited. The main reason for this was profit taking by those who had bought silver in advance of the launch of the ETF on the Comex and, especially, the over-the-counter (OTC) market. In addition, some 'stale' longs also saw the price level as simply too attractive

Indexed Gold and Silver Prices



Source: GFMS

Implied Net (Dis)investment



Source: GFMS

London Bullion Market (LBM) and Comex Turnover

(daily averages)

	LBM No. of Transfers	Turnover Moz	Comex Turnover Moz	LBM/ Comex Ratio
2000	256	116	63	1.8:1
2001	241	108	52	2.1:1
2002	241	87	63	1.4:1
2003	233	92	82	1.1:1
2004	326	104	101	1.0:1
2005	331	110	110	1.0:1
2006	447	147	109	1.3:1

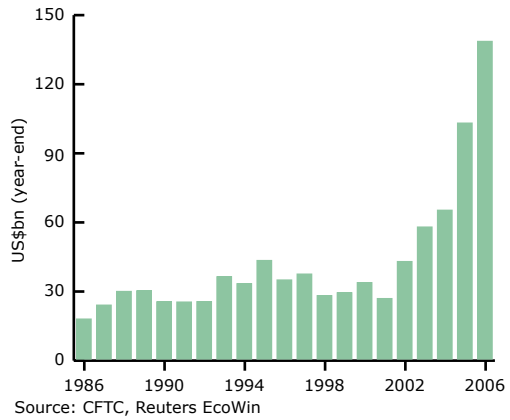
Source: LBMA, Comex

to pass up on the opportunity to sell all or part of their holdings. To a lesser extent the lack of net new demand immediately following the product's launch also reflected a shift by some existing investors from silver futures and other instruments to the ETF. Nevertheless, in spite of the countervailing selling referred to above, overall the market continued to be in net investment territory, at least up until the 25-year high of nearly $15 on May 12th, which coincided with the $725 peak in gold prices.

A change in the outlook for the US dollar (which had been weak over much of the first four months of 2006) at that point triggered a period of liquidations across the whole precious and base metals complex, which did not leave silver unaffected. By June 14th the price of the metal had fallen down to $9.72, which turned out to be its low for the year. Interestingly, although field research and publicly available data confirm a major bail-out took place across most arenas for silver investment, demand for the silver ETF initially continued to grow, its holdings peaking at 73.0 Moz (2,270 t), and then only suffering modest falls after that.

Value of "Fund" Positions in 13 Commodities

Combined non-commercial & non-reportable end-year positions in 13 commodity futures



Source: CFTC, Reuters EcoWin

From that point onwards and for the rest of the year, silver investor activity by and large mirrored that in gold. As a result, the silver price kept to a generally upward trend, but pushed back on numerous occasions by periods of liquidations. Overall, investor activity over the last six months of the year was far lower than that seen during the rally to the 25-year high in May and the subsequent bail-out. Holdings of the silver ETF continued to grow over the period, with liquidations being marginal and few and far between. Speculative positions in Comex futures, which had bottomed below the 40,000-contract mark by end-June (less than half their end-2005 level), failed to recuperate materially, while the OTC market saw two-way activity with buying apparently exceeding selling.

It is important to stress here that although movements in the gold price were the principal driver of silver investment in the second half of the year, they were by no means the only one. For instance, field research confirms the persistence of a core of "believers" that considered silver to be grossly underpriced and expected a rally to new highs. The group tended to also be bullish on gold, but expected silver would achieve better gains than its yellow cousin.

Looking at the year as a whole, our supply-demand analysis generates an implied net investment figure of 64.5 Moz (2,006 t) down by 17% year-on-year. In contrast to the other independently calculated components of our analysis, implied net investment is a derived figure that brings all other elements into balance. Inasmuch, it should not be viewed as a precise measure of the net impact of activity on the physical market but as a general indication of its direction and magnitude.

Indeed, this statistic does provide a good guide to the impact of investor activity on the physical market and GFMS can confirm that through analysis of both publicly available data and information collected through field research. Looking at 2006, for instance, the year saw a net inflow of 121.1 Moz (3,768 t) into the silver ETF, which, due to the nature of the product, is equivalent to investment in allocated physical metal. In addition, our information is that overall activity in the OTC market had a positive net impact in terms of physical silver demand, albeit much less than that of the ETF. Finally, there is evidence of additional buying taking place over the year via allocated accounts as well as healthy volumes of retail investor purchases in India.

At the same time, the dramatic decline in speculative positions in Comex and, to a far lesser extent, Tocom silver futures, is understood to have offset a significant part of this inflow into the ETF. As discussed in the next section, fund positions on the New York-based exchange were down by a nominal 161.7 Moz (5,031 t), comparing end-2006 with the situation at the end of 2005. Although the precise impact of this decline on the physical market cannot be measured, there is little doubt that it was of a significant magnitude. Finally, on the private investor front, information gathered from market participants suggests that there was large scale selling-back of silver coins in the secondary market last year, mainly by retail investors in the United States. Against this, for the first time in many years, there was some private investor interest in unallocated silver in Europe in 2006.

To sum up the above, 2006 saw strong net buy-side interest from investors in the ETF. When it comes to the OTC market, while there were substantial purchases in the first quarter, mainly by hedge funds, much of this silver was sold immediately prior to and in the aftermath of the launch of the ETF. Thereafter, there was a return to net demand, albeit at a much reduced level. Against this, there were significant liquidations of investors' positions in silver futures. The overall picture then is one of substantial net investment but with the market also experiencing significant selling back from funds and private investors, especially around the time of the ETF launch in April. The 64.5 Moz (2,006 t) implied net investment figure GFMS has derived for 2006 would therefore seem to fit quite well with the probable net physical market impact of the various developments in the investment arena seen last year and discussed above.

Net "Fund" Position on Comex

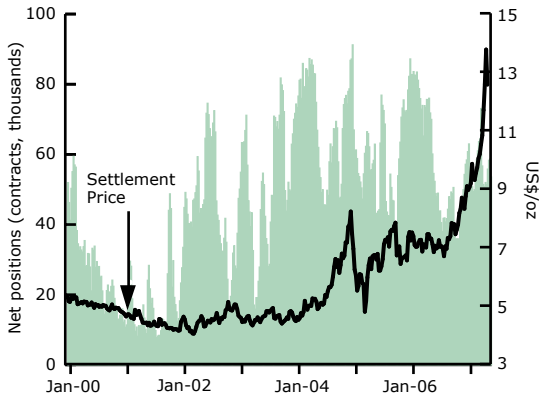
		Contracts	Moz	Price
2002		27,372	137	4.60
2003		29,153	146	4.90
2004		43,617	218	6.69
2005		38,787	194	7.32
2006	Q1	54,042	270	9.74
	Q2	31,204	156	12.16
	Q3	24,985	125	11.71
	Q4	31,849	159	12.57
2007	Q1	37,908	190	13.27

(average non-commercial and non-reportable net futures positions, Moz equivalent and Comex settlement price in $/oz; Source: CFTC)

Looking ahead, GFMS expect that the future of the yellow metal will remain of paramount importance to the silver price, particularly since an exogenous shock that would boost silver more than gold, such as the launch of the first silver ETF last year, is unlikely to appear in the near future. Given our view that the gold price will remain on a rising trend - largely driven by continued investor buying on the back of a weakening US dollar and heightened global economic and political insecurity - we would therefore expect silver prices to register further gains over the rest of 2007. The principal caveat here is the outlook for the world economy, as a slowdown in global GDP and industrial production growth would tend to hit silver prices, especially given the high share of industrial uses in total silver demand (47% in 2006). Associated with this is the probable collateral impact that a major sell-off in the base metals complex would have on the silver price.

Comex: Net "Fund" Positions

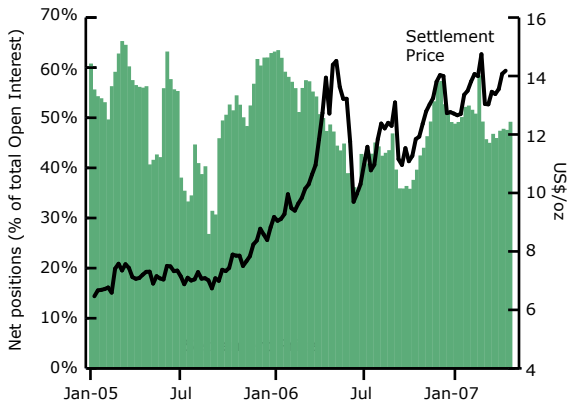
Non-Commercial & Non-Reportable Net Positions & Price



Source: CFTC

Comex: Net "Fund" Positions

Weekly Net-Positions as a Percentage of Total Open Interest



Source: CFTC

Comex

Combined non-commercial and non-reportable net positions in silver futures listed on Comex, as reported by the CFTC, can be used as a proxy for speculative activity on the exchange. In a counter-intuitive manner and in contrast to the trends seen in the OTC, physical and silver ETF markets, the period from the start of 2006 through to the May 12th price peak saw the net long generally keep to a declining trend. Liquidations also continued throughout the general May and June bail-out. Over the second half of the year positions closely followed the price of silver, but failed to achieve noteworthy levels. At year-end, the net long stood at 51,231 contracts, down by 32,349 contracts (equivalent to a nominal 161.7 Moz or 5,031 t) on the end-2005 level.

At 5.4 million contracts (equivalent to a nominal 27,165 Moz or nearly 845,000 t) total turnover in Comex silver futures in 2006 was down at the margin from the level recorded in the previous year. As a result of the decline in speculative positions mentioned above, total open interest in Comex silver futures fell by more than a fifth to the end-year figure of just over 101,000 contracts.

Chicago Board of Trade

Speculative positions in CBOT silver futures remained a small fraction of the US futures market in 2006. Over the limited number of days when the CFTC reported non-commercial and non-reportable positions on the CBOT, the combined net long averaged under 5,000 contracts, less than 10% of the equivalent figure for the Comex.

Looking at total volume in CBOT 100-oz silver futures, this reached 1.2 million contracts last year, up 16-fold year-on-year. Open interest also rose in 2006; by end-December it had reached nearly 10,000 contracts, six times the figure seen at end-2005. It is interesting to note here that in contrast to gold, where the Chicago-based exchange has accounted for more than one-third of US futures turnover in that metal, the CBOT's penetration of the silver market has been far more limited.

Tocom

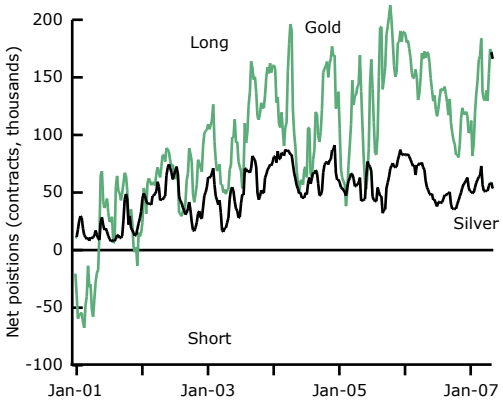
Activity on the Tocom only accounts for a small share of the global silver futures market. At end-2006, the nominal equivalent of total open interest on the Japanese exchange amounted to 6% of that on the Comex.

Non-reportable net positions in Tocom futures (data on which is kindly provided by Sumitomo Corporation) can be used as a broad indication of speculative activity on the Japanese exchange. After growing over the first few weeks of 2006, to peak at 15,512 contracts on February 9th, the net long kept to a generally downward trajectory during much of the period to mid-October. The recovery that came immediately after failed to achieve noteworthy levels, and the figure ended the year at just over 5,000 contracts (a nominal 10 Moz or 300 t).

Total volume on the Tocom reached a little less than 860,000 contracts (a nominal 1,655 Moz or nearly 51,500 t), up by 5% year-on-year. Total open interest on the exchange at year-end stood at over 15,000 contracts, down 11% on the end-2005 figure.

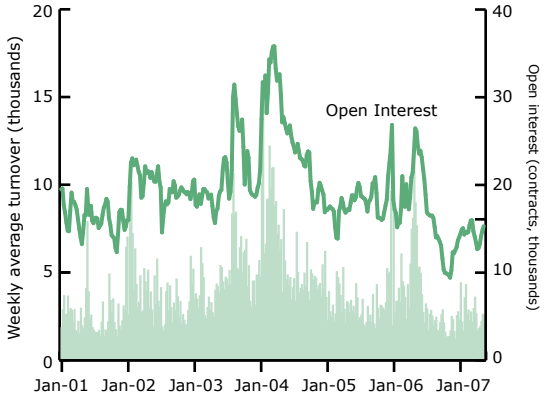
Comex: Net "Fund" Positions

Non-Commercial & Non-Reportable Net Positions



Source: CFTC

Tocom Futures Turnover and Open Interest



Source: Tocom

The Silver Exchange Traded Fund

Since as far back as May 2005, rumors had been floating in the market regarding the potential launch of a silver ETF. On April 28th last year, the product started trading on the American Stock Exchange.

For some time prior to the product's launch, there had been some speculation over the potentially very dramatic impact the product could have on the market, by far exceeding the effects similar products have had on gold. The conjecture was based on the markedly lower above-ground stocks of silver and the liquidity squeeze an easily accessible investment product linked to positions in allocated metal, such as the silver ETF, could cause.

As a result, the run up to the silver ETF saw investors massively expand their positions in silver, expecting the price of the metal would explode after the product's launch. At the same time, there is evidence of precautionary borrowing taking place by market participants looking to avoid the inflated lease rates that many expected would appear because of the product. In a classic case of a self-fulfilling-prophecy, both the silver price and the cost of borrowing the metal rose markedly well before the product launched.

Soon after the silver ETF started trading, these fears were proved to be exaggerated. As discussed in the main section of this chapter, a large portion of the long position that had been amassed in the OTC and futures markets was unwound, both by investors moving their funds into the new product and, especially, others taking profit at multi-year highs, this largely offsetting the new investment that took place in the iShares Silver Trust. Soon thereafter, in late May through to mid-June, the general sell-off in precious and base metals also saw investors liquidate long positions in silver, at this stage largely to cut losses. Consequently, the 25-year high the silver price reached on May 12th could not be sustained.

As time progressed, it also became evident that the ETF's drain on liquidity from the market was less dramatic than initially feared. The precautionary lending that had taken place earlier in the year was gradually unwound, taking some pressure off silver leasing rates. Indeed, these trended downwards until they bottomed in late November, and silver borrowing costs have remained at low levels ever since.

Although the initial fears of prices reaching historical highs as holdings of the silver ETF rocketed have failed to materialize, there is little doubt that the impact of the iShares Silver Trust on the market has been, to say the least, notable. The product has granted easy access to holdings in allocated metal to a number of investors that had been unable or reluctant to buy silver derivatives or physical metal. And, although the market has certainly not been drained of available metal, there is little doubt that the silver ETF has led to a sizeable net increase in silver investment.

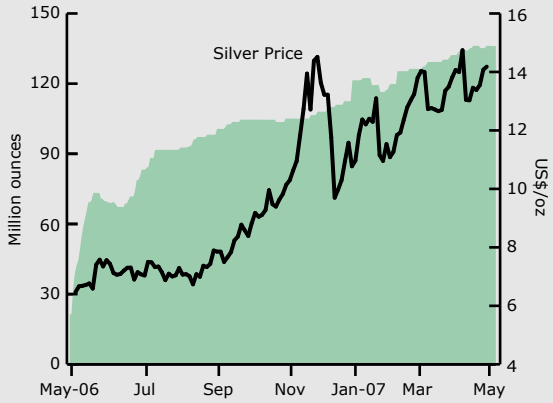
One of the more notable effects of this has been the marked rise in the silver price, as well as the range within which it has traded. In 2006, this was $8.83-$14.94 whereas in 2005 it had been a more modest $6.39-$9.22. (Moreover, had rumors of a silver ETF not emerged in 2005, it is unlikely that the upper end of that year's range would have been reached.)

There is of course the argument that, on the basis of the rising gold price alone, the price of the white metal would have risen substantially last year. One way to examine how valid this point is would be to apply the daily growth rate of the gold price to silver to generate a "dummy" silver price series that can be used as a benchmark for comparison. Starting this exercise on July 1st 2005, the resulting series generates a calendar 2006 average of $9.80 and a range of $8.52-$11.76 for last year.

In the absence of a silver ETF, these figures would have most likely been exceeded, as price gains in silver do generally tend to overshoot those in gold, largely due to the white metal's more limited liquidity. Nevertheless, the magnitude of the difference between the levels of the average as well as the range limits are hard to justify using this argument. The evidence therefore suggests that the silver price has enjoyed a large premium due to the silver ETF.

It is finally worth mentioning that in April and May this year, a number of new silver ETFs were launched. ETF Securities Ltd. have launched products on the London Stock Exchange, Deutsche Börse and Euronext, while Zürcher Kantonalbank have launched a silver ETF on the SWX Swiss Exchange. The impact of all of these on the market has so far been and is expected to remain minimal.

iShares Silver Trust Holdings



Source: Barclays iShares

Investment

Indian Investment in Physical Silver

The Indian market has seen an important shift away from investment in silver in traditional jewelry form to a burgeoning demand for locally produced small bars and coins. This trend in fact began in the 1990s following the introduction of a more liberal regime for precious metals in 1990 when the Gold Control Act was repealed. However, up until comparatively recently, investment in bars and coins only represented a tiny share of overall demand. In the last few years that has changed, with sizable growth being recorded in these purer and more efficient forms of investment. As explained in Chapter 7, this fact, coupled with the findings from new research done in India, has prompted us to strip this silver investment demand out of our jewelry and silverware fabrication series for the country.

Last year, investment in bars and coins is estimated to have fallen by 16% to around 9.5 Moz (295 t), representing about 11% of total silver demand in the country. Typically the bullion products purchased are relatively low in weight, with coins available from as little as five up to a maximum of 500 grams and bars ranging from 25 grams to 1 kilogram.

OTC Market

Due to the lack of publicly available data on activity in OTC products on silver, GFMS cannot provide a meaningful estimate of the impact of OTC activity on the physical market. However, information collected through field research suggests that during the first few months of the year there was tremendous interest for products linked to the white metal, driven by expectations of rocketing silver prices after the launch of the silver ETF. In addition, the white metal also benefited from interest in commodity basket products that contained weightings in silver, a significant portion of which were structured so as to follow one of the main commodity indices.

In the latter part of April and particularly in the run up to and following the launch of the iShares Silver Trust, there were substantial liquidations by investors mainly taking profits but also to some extent replacing their positions in the OTC market with ones in the new product. These liquidations continued after the price peak on May 12th, in line with the general bail-out in the precious and base metals complex in the second half of May and in June that saw the silver price bottom below the $10-mark in mid-June.

OTC activity over the rest of the year continued at reduced levels on both the buy and sell sides, with the market notably quieter than it had been during the busy January-June period.

Physical Investment

Direct purchases or sales of physical bullion in the form of coins or bullion bars represent a small but growing part of the silver investment universe. Physical investment has increased in importance for two main reasons. The first is the shift in the Indian market away from quasi-investment in the form of high karat silver jewelry to purer forms of investment in the shape of regular bullion bars and coins. Due to the importance of this phenomenon, it is discussed in the dedicated focus box opposite.

The second reason for the growing salience of direct physical investment in silver is the pick up in activity by private investors in bullion in Europe and North America. This has been very much stimulated by the rise in the silver price, which has both mobilized existing investor stocks and encouraged some fresh buy side interest.

In the case of the United States, the growth in investor activity in physical silver has seen much higher volumes of dishoarding of coin bags and 100 oz bars, although it is worth noting that this has not reached the scale of disinvestment recorded during the 1998 rally. Although other investors purchased part of the bullion disinvested last year, the bulk of it ended up being melted by dealers. This type of secondary market activity was at its height during the April/May price spike and since then has died down considerably. Likewise, and as discussed in the coin fabrication section in Chapter 7, primary market demand for US Eagle coins was strongest in the first half of 2006.

In Europe, meanwhile, the higher price encouraged a noticeable surge in buy side interest, particularly in Germany. This partly took the form of outright purchases of bullion bars, typically 5 kilogram ingots and, to a lesser extent, 1 oz coins, in spite of the VAT imposed on physical silver. In addition, some investors have bought silver undelivered and therefore tax free via specialist funds that hold the metal in bonded warehouses. Overall, such new physical investment demand in Germany would have taken several million ounces off the market in 2006.

4. Mine Supply

- ***Global mine production finished the year at the lower end of our forecast range, with a fractional rise to total 646.1 Moz (20,095 t).***

- ***Primary silver production in 2006 fell by 10% but the global total was buoyed by strong gains generated as a by-product of lead/zinc (+4%), gold (+6%) and copper (+1%).***

- ***Primary silver cash costs stood at a weighted average of $2.74/oz, down by $0.51/oz. Higher base metal and gold prices significantly increased mines' by-product credits.***

- ***Producer hedging swung to the demand side with a net fall in the delta-adjusted book of 6.8 Moz (211 t), reducing its level to 82.0 Moz (2,549 t).***

Mine Production

- ***Plummeting output in Australia was offset by strong growth by the world's top three producers, Peru, Mexico and China to leave global mine production at a record high, totaling 646.1 Moz (20,095 t).***

Global silver mine production edged up fractionally in 2006, with notable gains recorded in Asia and most importantly in Latin America, where production grew by 12% year-on-year, led by Peru. The broadly positive outcome for growth in mine supply was largely erased by a disastrous year for Australia, where production was cut by more than a quarter (down 21.7 Moz or 676 t). Formerly the world's third largest silver producing country, output collapsed as Australia's two largest mines were severely impacted by ground stability and metallurgical complications.

Top 20 Silver Producing Countries

Ranking 2006	Ranking 2005		Output (Moz) 2005	Output (Moz) 2006
1	1	Peru	102.6	111.6
2	2	Mexico	93.0	96.4
3	4	China	67.0	75.4
4	3	Australia	77.3	55.6
5	5	Chile	44.3	51.5
6	7	Poland	40.5	40.4
7	6	Russia	42.3	39.6
8	8	United States	39.2	36.7
9	9	Canada	34.2	31.2
10	10	Kazakhstan	25.9	26.1
11	11	Bolivia	12.8	15.2
12	13	Sweden	9.1	8.6
13	12	Indonesia	9.9	7.7
14	14	Morocco	7.4	7.6
15	16	Argentina	5.0	6.1
16	15	Turkey	5.2	6.0
17	17	Iran	3.0	3.2
18	18	South Africa	2.8	2.8
19	19	India	2.2	2.7
20	20	Uzbekistan	1.9	2.3

Source: GFMS

Top 20 Silver Producing Companies

2006	2005	Company	Country	2005	2006
1	2	Industrias Peñoles	Mexico	47.4	46.9
2	3	KGHM Polska Miedź	Poland	40.0	39.9
3	1	BHP Billiton	Australia	53.8	37.0
4	4	Kazakhmys	Kazakhstan	20.5	21.5
5	5	Polymetal [1]	Russia	18.9	17.3
6	7	Cia. Minas Buenaventura [2]	Peru	15.3	17.0
7	6	Grupo Mexico	Mexico	18.5	16.2
8	8	Rio Tinto	UK	14.9	14.0
9	9	Coeur d'Alene [1]	USA	13.7	13.6
10	19	Goldcorp [3]	Canada	7.2	13.4
11	13	Volcan Cia. Minera	Peru	11.1	13.3
12	11	Pan American Silver [1]	Canada	12.5	13.0
13	14	Hochschild Mining [1]	Peru	10.6	11.6
14	10	Xstrata [4]	Switzerland	13.3	11.5
15	15	Zinifex	Australia	9.7	9.6
16	12	Barrick Gold	Canada	12.5	9.6
17	16	Codelco [5]	Chile	9.2	9.2
18	17	Newmont Mining [5]	USA	9.2	8.5
19	18	Boliden AB	Sweden	7.3	6.8
20	22	Meridian Gold	USA	5.5	6.6

1 Primary silver producer based on revenue
2 Includes equity production from Minera Yanacocha
3 Includes production from Marlin acquired in November 2006 and attributable output from La Coipa acquired in May 2006
4 Includes four months attributable production from Falconbridge acquired in August 2006
5 estimates

Source: Company Reports, GFMS

Table 2 - World Silver Mine Production (million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Poland	33.8	36.0	35.9	36.7	38.0	38.9	44.2	43.8	40.5	40.4
Sweden	8.5	8.6	8.9	9.5	8.8	9.4	9.9	9.4	9.1	8.6
Greece	1.2	1.4	1.3	1.0	2.0	2.4	0.1	0.0	0.1	0.8
Romania	1.4	1.2	1.2	1.1	1.2	1.0	0.9	0.9	0.9	0.7
Portugal	1.1	1.0	0.9	0.7	0.7	0.6	0.7	0.8	0.8	0.6
Bulgaria	1.0	0.8	0.7	0.6	0.8	0.8	0.7	0.6	0.7	0.5
Yugoslavia (former)	2.1	1.8	1.0	1.0	0.7	0.6	0.2	0.1	0.3	0.4
Czech & Slovak Republics	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Spain	2.1	1.5	3.8	3.7	1.8	0.4	0.1	0.1	0.2	0.2
Ireland	0.4	0.3	0.3	0.5	0.3	0.2	0.3	0.2	0.2	0.1
France	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Countries	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Total Europe	**52.1**	**53.3**	**54.3**	**55.0**	**54.7**	**54.7**	**57.4**	**56.2**	**52.9**	**52.6**
North America										
Mexico	86.1	86.4	79.8	84.3	88.7	88.3	82.6	82.6	93.0	96.4
United States	70.1	66.2	62.7	63.7	55.9	43.4	39.9	40.2	39.2	36.7
Canada	39.0	36.4	37.5	37.7	40.7	44.1	41.0	41.6	34.2	31.2
Total North America	**195.2**	**189.0**	**180.0**	**185.7**	**185.3**	**175.9**	**163.5**	**164.4**	**166.5**	**164.2**
Latin America										
Peru	66.8	65.1	71.7	78.4	86.0	88.8	93.9	98.4	102.6	111.6
Chile	35.1	43.1	44.4	39.9	43.4	38.9	42.2	43.7	44.3	51.5
Bolivia	12.4	13.1	13.6	14.9	12.2	14.9	15.8	14.0	12.8	15.2
Argentina	1.1	2.2	3.3	3.3	5.6	4.1	4.4	4.6	5.0	6.1
Honduras	1.5	1.5	1.6	1.7	1.6	1.8	1.7	1.6	1.8	1.8
Brazil	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Dominican Republic	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Countries	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.6
Total Latin America	**117.8**	**125.9**	**135.4**	**138.8**	**149.5**	**149.1**	**158.8**	**163.1**	**167.4**	**187.1**
Asia										
China	40.7	43.7	48.0	51.3	55.6	52.9	58.8	63.2	67.0	75.4
Indonesia	8.1	10.0	8.7	10.0	12.0	10.7	9.6	8.6	9.9	7.7
Turkey	2.9	2.8	3.5	3.5	3.7	3.7	3.6	4.0	5.2	6.0
Iran	2.4	2.5	2.6	2.7	2.6	2.6	2.6	2.7	3.0	3.2
India	1.6	1.7	1.9	1.8	1.7	1.9	1.9	2.1	2.2	2.7
Papua New Guinea	1.6	1.9	1.9	2.4	2.2	2.1	2.0	1.7	1.6	1.6
Mongolia	1.0	1.1	1.1	1.0	1.2	1.1	1.1	1.2	1.2	1.2
North Korea	1.2	1.0	0.8	0.7	0.6	0.7	0.8	0.8	0.8	0.8
Philippines	0.6	0.6	0.6	0.7	1.1	0.3	0.3	0.3	0.6	0.8
Thailand	0.1	0.1	0.2	0.2	0.2	0.7	0.6	0.5	0.6	0.5
Japan	2.8	3.0	3.0	3.3	2.6	2.6	2.5	2.4	1.7	0.4
Saudi Arabia	0.5	0.4	0.3	0.3	0.3	0.3	0.6	0.5	0.4	0.3
Malaysia	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Countries	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.3
Total Asia	**63.9**	**69.2**	**72.8**	**78.1**	**83.9**	**79.8**	**84.6**	**88.3**	**94.5**	**101.0**
Africa										
Morocco	8.4	9.8	8.9	9.3	9.1	8.5	6.2	6.7	7.4	7.6
South Africa	5.2	5.1	4.9	4.6	3.5	3.6	2.8	2.3	2.8	2.8

Table 2 - World Silver Mine Production (million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Dem. Rep. of the Congo	0.0	0.0	0.0	0.0	0.0	0.1	1.2	1.1	1.8	2.2
Namibia	1.2	0.4	0.0	0.5	0.6	0.6	0.9	0.9	1.0	1.1
Zambia	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4
Zimbabwe	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Countries	0.3	0.4	0.5	0.5	0.7	0.7	0.7	0.8	0.8	0.7
Total Africa	**15.7**	**16.2**	**14.7**	**15.3**	**14.3**	**13.8**	**12.2**	**12.1**	**14.2**	**15.0**
Oceania										
Australia	35.6	47.2	55.0	65.1	63.3	66.8	59.9	71.5	77.3	55.6
New Zealand	1.0	0.8	0.8	0.7	0.9	0.9	1.0	1.0	1.4	1.4
Fiji	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Total Oceania	**36.7**	**48.1**	**55.8**	**65.8**	**64.3**	**67.8**	**60.9**	**72.5**	**78.7**	**57.0**
CIS										
Russia	20.9	19.5	19.8	20.2	20.9	22.5	34.4	39.6	42.3	39.6
Kazakhstan	14.1	17.0	20.6	28.6	30.2	27.3	25.8	22.6	25.9	26.1
Uzbekistan	2.5	2.6	2.0	2.0	1.7	1.6	1.7	1.9	1.9	2.3
Armenia	1.0	1.0	1.1	1.1	1.2	1.3	1.3	1.3	1.2	1.2
Tajikistan	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Kyrgyzstan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total CIS	*38.6*	*40.2*	*43.7*	*52.1*	*54.2*	*52.8*	*63.4*	*65.6*	*71.5*	*69.2*
World Total	**520.0**	**542.1**	**556.8**	**590.9**	**606.1**	**593.8**	**600.7**	**622.2**	**645.6**	**646.1**

At BHP Billiton's Cannington in Queensland, the world's largest silver producing mine in 2005, safety policy led to the idling of operations at the property's southern zone during a period of rehabilitation work that occupied much of the second half of the year, the result being a drop in reported payable production of 16.2 Moz (504 t) in 2006.

More positively though, Peruvian production received a boost, particularly in the base metals sector, with the Colquijirca and Cerro de Pasco zinc operations both posting significant gains. Elsewhere, the Chinese base metals sector was influential with, for example, growth at Henan Yuguang Gold-Lead company and Yunnan Copper. Strong sector growth for Mexican and Argentinean gold mines helped push the global total fractionally higher in what is envisioned to be an uninterrupted global mine supply increase through 2008, with a 3% rise in 2007.

North America

North American output contracted moderately as firm growth in **Mexico** was erased by falls of roughly similar magnitude in both the United States and Canada. Mine production in Mexico expanded by a generous 3.4 Moz (105 t) year-on-year to end 2006 4% higher. Peñoles' zinc mine portfolio recorded a modest increase, with gains at Naica, Tizapa, Francisco I Madero and Bismark, partly offset by Sabinas. Reining in the country's growth, extended industrial action at Southern Copper Corporation's Mexican operations, particularly La Caridad, led to reductions of 2.3 Moz (72 t).

A significant contribution was made by Gammon Lake's Ocampo gold/silver mine, which generated a reported 1.3 Moz (41 t) of silver, having achieved its first pour in February 2006, while the company total was augmented by the El Cubo mine, acquired in the transaction of Mexgold Resources. Goldcorp reported one of the strongest gains at the consolidated Luismin mines, where increased mine development led to an 18% rise in mill feed volumes.

Changes within Mexico's primary sector were dominated by the closure of Hecla's San Sebastian in October 2005, which led to a deficit in 2006 of 0.7 Moz (22 t), although exploration activities at the property continue. More modest reductions included those at First Majestic's San Martin, acquired in September 2006, which recorded an 11% decline, and Peñoles' Fresnillo, the world's largest silver producer, which dipped by 1%. Creating an offset to the declines, albeit at a lower level than forecast, output at Pan American Silver's La Colorada expanded by 0.4 Moz (12 t), as a restart of sulfide mine production

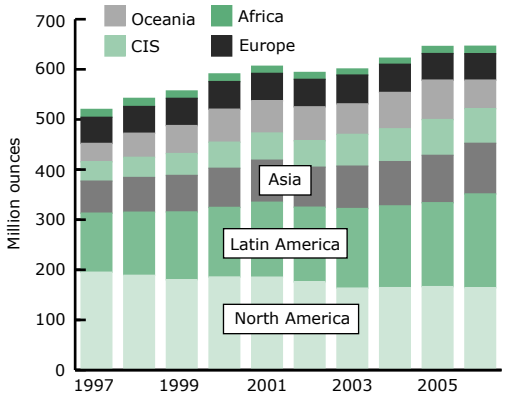
and processing began to show improvements in the latter part of the year. More modest additions came from Great Panther Resources, whose Topia and Guanajuato mines' first production provided a further 0.3 Moz (10 t).

Silver mine production in the **United States** dropped by almost 7% last year to record the lowest production level since 1986. This disappointing outcome was partly associated with lower production at mature primary silver mines. Output at Coeur d'Alene's Rochester mine in Nevada fell by 0.6 Moz (19 t) as mining activities are due to conclude in 2007 (with residual heap leach production expected to continue until 2011). The company also completed the sale of the Silver Valley operations in Idaho to US Silver Corporation in June 2006. Silver Valley includes the Galena operating mine as well as the Coeur and Caladay properties, which are principally focused on exploration and are being operated with a reduced workforce. Though production for the full year has not been disclosed, currently available data (for the first five months of 2006) pointed to substantially lower output. Elsewhere, moderate declines were recorded at the Rio Tinto and Hecla joint venture in Alaska, Greens Creek, where a 13% decline in grades was chiefly responsible for a fall in output of some 0.8 Moz (25 t) for the year.

Eliminating a significant portion of the losses mentioned above, solid increases were posted by Rio Tinto's Bingham Canyon, where refined output was raised by 0.6 Moz (19 t) and at Hecla's Lucky Friday, where increased ore extraction at the 5900 level led to a production increase of just under 0.5 Moz (14 t).

Canadian silver production shrank by 3.0 Moz (94 t) year-on-year in 2006, the second consecutive annual fall which has seen the nation's output diminish by one quarter or 10.5 Moz (326 t) from 2004's total. Eskay Creek's declining production levels were at the forefront of the country's reduction. Lower mining rates and ore grades led to a substantial drop in silver by-product, as the mine progresses towards the end of its reserve life in early 2008. Further noteworthy reductions were recorded at the Brunswick operation acquired by Xstrata in the Falconbridge transaction. A very modest offset to Canada's heavy falls came from Agnico Eagle's LaRonde, where improved silver recoveries led to a 0.1 Moz (4 t) increase in payable production.

World Silver Mine Production



Source: GFMS

Latin America

Latin America saw substantial growth with improvements in all significant producing countries leading to overall gains in the region totaling 19.7 Moz (614 t). **Peru**, the world's number one producer, led the region's gains in 2006 where output surged by 9% to total 111.6 Moz (3,471 t). Growth was principally from within the lead/zinc sector which expanded markedly, with output from the primary, gold and copper sectors broadly neutral or modestly lower in 2006. The most influential driver behind the nation's gain was a remarkable 5.8 Moz (180 t) increase at Minera El Brocal's Colquijirca mine. A greater than doubling of processed silver grades, combined with higher processing rates and improved metallurgical recoveries, explained the growth described above. Further strong rises came from Minera Volcan's Cerro de Pasco zinc mine production whose output rose by almost 40% year-on-year to total 6.1 Moz (189 t).

Conversely, many of the Peru's larger copper operations that generate by-product silver saw reductions in silver output in 2006. The Antamina copper/zinc mine recorded a 9% decline, partly due to increased haulage distances, and Southern Copper Corporation's Toquepala and Cuajone open pit operations saw output contract by a combined 0.3 Moz (8 t).

Aside from gains at Colquijirca, Buenaventura's production was somewhat reduced with the company's other two major silver interests both recording losses. At the wholly-owned Uchucchacua, a change in drilling methods reportedly led to less consistent mining rates, particularly in the early part of the year, necessitated for safety reasons, resulting in a decline for the full year of 0.5 Moz (16 t), while at the Newmont and Buenaventura

Yanacocha joint venture gold mine, lower grades and increased stripping activities in the latter part of the year also generated significantly reduced volumes. Elsewhere, Pan American Silver's Peruvian silver production declined by a modest 0.1 Moz (3 t), as falls at the Stockpile operation, and the Quiruvilca and Huaron mines, were partly offset by growth at Morococha. Hochschild delivered positive results with the company's three silver and gold producing mines recording an increase in silver production of almost 1.1 Moz (33 t). Much of the additional supply originated at the Selene primary silver mine, where a 24% rise in mining rates led to a proportionate increase in silver output. Further gains at Arcata were partly offset by a decline at the flagship Ares operation.

Chilean output climbed by 16% or 7.2 Moz (223 t), the third strongest gain behind Peru and China. Double-digit growth to silver output at the country's two major gold mines, namely El Peñón and La Coipa, provided a large part of the country's rise. At El Peñón, the increased extraction of ore from the higher silver grade Dorada and Cerro Martillo sections of the mine led to a 16% improvement in silver production, to 6.4 Moz (200 t). At La Coipa, meanwhile, where production grew significantly it was also an increased focus on a silver-rich section of the deposit, with exploitation of the separate Puren joint venture mine having commenced in July 2006. Taking the shine off part of the gains in Chile, the primary Cerro Bayo mine reported a decline of 0.5 Moz (17 t) as the year's activities included the mining of narrow lower grade vein systems, while a more modest reduction occurred at Breakwater's El Toqui.

In **Bolivia**, output rose by around 18% to total 15.2 Moz (472 t). Within the primary sector, Pan American Silver's San Vicente output more than doubled during its ongoing ramp-up to produce a total of 0.5 Moz (15 t). Following President Morales' ascent to power at the start of the year, questions have been raised over the security of privately owned operations in the resources sector, which has seen the nationalization of the country's natural gas sector in May and Sinchi Wayra's Vinto tin smelter in February 2007. That said, the development and private control of the two major silver projects, San Cristobal and San Bartolome, currently appears secure. In **Argentina**, production rose by 22% to 6.1 Moz (190 t), largely thanks to a full year of production at Barrick's Veladero, which commenced in September 2005 and recorded an estimated 0.5 Moz (14 t) improvement for the year, and to Coeur d'Alene's Martha primary silver mine, where production climbed by 0.6 Moz (19 t) primarily due to the mining of veins of higher silver grade ore.

Asia

Chinese silver output continued to rise unabated for the fourth consecutive year with a significant rise estimated at 13% to total 75.4 Moz (2,345 t). By-product silver from lead mines was a key factor behind the noteworthy increase. In addition to increased ore production, contained silver grades are also understood to have risen in the last year, while reports of plant development activities to enhance recovery rates would have been a further contributory factor.

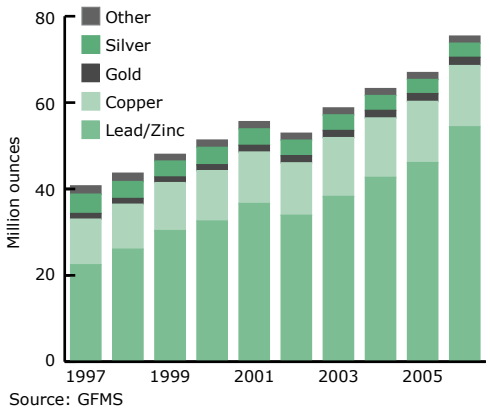
Looking at some of the country's larger operations, the Henan Yuguang Gold-Lead Company posted a 16% increase to total 14.8 Moz (460 t), and Yunnan Copper reported 8% higher silver production of 14.0 Moz (435 t).

Indonesian production, on the other hand, declined by one-fifth on the back of lower by-product from copper mining. The significant Grasberg and Batu Hijau mines both saw sizable reductions to silver production (as well as both copper and gold) last year, although a modest offset was provided from the ramp-up of production at Straits Resources' Mount Muro.

Oceania

Australian silver production plummeted last year to 55.6 Moz (1,728 t), a 28% descent compared to 2005 levels, relegating the nation from third to fourth largest silver producer. Central to the Australia's downturn was a significant interruption to activities at BHP Billiton's Cannington mine in Queensland. It was announced

Chinese Silver Mine Production by Source Metal



Source: GFMS

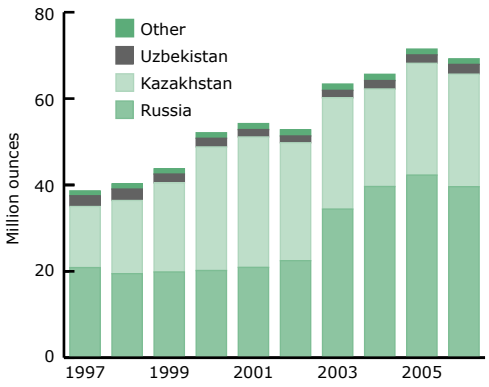
in April 2006 that following an assessment of ground conditions, decline and stope access rehabilitation work was to be undertaken throughout the latter part of 2006. Over this time production levels from the southern zone of the mine were severely affected and at the nadir, mining rates were less than half that of capacity a year earlier. The result was a 16.2 Moz (504 t) decline in the mine's payable silver output for the year, to 27.7 Moz (862 t).

Further substantial declines were recorded at Xstrata's Mount Isa operations in North Queensland, where reported silver bullion production fell by 5.1 Moz (158 t). Mining at the actual Mount Isa lead mine ceased at end-2005, with ore feed more recently sourced from the Black Star mine. This transition of activities has led to lower metallurgical recoveries, which have been further hampered by the late commissioning of the first phase expansion at the operation's concentrator. Adding to the poor situation, further drops occurred at CBH Resources' Endeavour mine due to ground stability issues at the end of 2005 impacting operations in 2006, and at Zinifex's Century complex where an extended plant maintenance shutdown occurred in the second half of the year. Countering a fraction of the nation's drop, significant improvements were recorded at Oxiana's Golden Grove and BHP Billiton's Olympic Dam.

Commonwealth of Independent States

Following a protracted series of annual increases, silver production in the Commonwealth of Independent States (CIS) fell by 3% in 2006 but nevertheless remained well above 2004 levels. Behind the region's reduction in 2006 was a fall in Russia, which generates over half of the CIS' collective output. Offsetting part of the drop, modest improvements were recorded in Kazakhstan and Uzbekistan.

CIS Silver Mine Production



Source: GFMS

Production in **Russia** totaled 39.6 Moz (1,232 t), a drop of 6% year-on-year. Output at Polymetal, Russia's leading silver producer and the world's largest primary silver miner in 2006, declined by 1.6 Moz (51 t). It is estimated that the huge Dukat operation accounted for roughly half of this decline, and the balance due to combined losses at the company's smaller Lunnoye silver mine and the Khakanja and Vorontsovskoe gold operations. In **Kazakhstan**, production grew by a modest 0.2 Moz (5 t) to 26.1 Moz (811 t). The gains were driven by higher silver grades at Kazakhmys' Artemyevskoe mine and a contribution from the new Kosmurun mine which started up in March 2006, and that led to an improvement of 1.0 Moz (31 t), in spite of the cessation of operations at the Abyz mine during the year.

Europe

Production in **Poland** in 2006 was stable at 40.4 Moz (1,257 t). Almost all of the total can be attributed to Europe's largest silver producer, KGHM Polska Miedź, where substantial silver is generated as a by-product at the company's copper operations. Production from the company's three mining divisions, namely Lubin, Rudna and Polkowice-Sierszowice, totaled 39.9 Moz (1,241 t), representing a negligible decline of less than 1%. In **Sweden**, Europe's only other significant producer, output fell by 6% to 8.6 Moz (266 t). Diversified miner, Boliden bore the brunt of the country's losses at its Boliden Area zinc operation. Additional supply was recorded for **Greece** last year, which improved markedly to 0.8 Moz (25 t) with a ramp-up of concentrate shipments from European Goldfields' Stratoni, where operations re-commenced in September 2005, responsible for the rise.

Africa

African silver production improved by a modest 5% year-on-year, representing an increase of 0.8 Moz (24 t). The majority of the continent's production comes from **Morocco**, where through their subsidiary Société Métallurgique d'Imiter, Managem mine the high grade primary silver Imiter operation. Imiter produced 6.0 Moz (186 t) in 2006, a 3% improvement. However, most of Africa's growth occurred in the Democratic Republic of the Congo, where production at Anvil mining's Dikulushi copper operation climbed by 26% to total 2.2 Moz (68 t) for the year.

Outlook

• Robust growth of around 3% is anticipated for 2007, as fresh mine supply, particularly in South America and Mexico, as well as a recovery in Australia, will more than offset declining production at maturing mines.

Looking to the end of the current year, production is expected to be bolstered by fresh supply from the start up of a number of major projects, concentrated in South America and Mexico, although this will be partly offset by the downscaling of mature operations such as the Eskay Creek gold-silver mine, where closure is due in 2008.

Resurgent growth is expected in Bolivia, although the full impact will not be seen until 2008 or perhaps 2009. Apex Silver's huge San Cristobal is currently scheduled to start producing by the third quarter of 2007 and is envisioned by GFMS to contribute around 4 Moz (125 t) in the remainder of the year, before ramping up. (Design capacity indicates in excess of 22 Moz (680 t) of annual silver production in its formative years.) Coeur d'Alene's substantial San Bartolome is currently on track to start some months later, in early 2008 and contribute a further 9 Moz (280 t) to the Bolivian total the same year.

Strong gains are also expected in Mexico, which later in the decade will likely recapture the world number one spot: Pan American Silver's Alamo Dorado is currently facing commissioning complications but is nevertheless slated to produce 3.6 Moz (112 t) in 2007, with growth in 2008, while also in 2008 a material contribution is expected from Minefinders' Dolores operation. Peruvian growth is likely to principally arise through capacity expansions at existing mines including Hochschild's Arcata and Selene, and by Minera Volcan.

Outside of the Americas, Australian production will stage a recovery from current low levels as Cannington returns to normal production, with more modest improvements likely at Mount Isa and Century, along with fresh supply from Macmin's Twin Hills project (where mining commenced in January and plant commissioning is currently underway). Finally, continued increases are expected in China with, for example, news of the recent commissioning of additional lead-silver capacity by the Yunnan Xiangyun-Feilong Co, where silver production capacity has been increased by over 3.7 Moz (116 t).

By-Product Analysis

• Silver production from primary mines contracted by 10% to account for 25% of gross silver output.

• Higher by-product silver from lead/zinc and gold production made up for losses from the primary sector.

A drop of 10% was recorded for production from primary silver mines in 2006. Again, the 16.2 Moz (504 t) decline in payable production at Cannington was the main reason for this global change, with further influence from declines at other world class primary mines including Fresnillo in Mexico and Uchucchacua in Peru. Conversely, as tabled on page 30, silver production from the gold sector rose noticeably, by 6% as new gold/silver mines came on stream in Mexico, and the mining of more silver rich ores occurred in Chile.

The base metals sector was characterized by further substantial price advances in 2006, a trend that has been extended into 2007. A key driver has been the strong metals-intensive growth that is underway in a number of areas. Growth has been particularly rapid in what are now termed the "BRICs" (Brazil, Russia, India and China), with the performance of the latter critical, as it is by far the largest consumer of all the individual base metals. The market has also been supported by growth in the OECD economies. Last year, demand expanded strongly within Europe, which offset weaker conditions in the North American market.

A low level of investment earlier this decade left the mining industry poorly positioned to meet the surge in demand. As a result, utilization rates at existing operations have increased sharply and, in most cases, mines are operating at full effective capacity. High utilization rates have in turn raised the risk of operational problems and growth in base metal supply in 2006 was constrained by a myriad of technical difficulties and labor disputes.

In 2006, global zinc mine output increased by just 2.2% to 10.359 million tons according to the International Lead Zinc Study Group (ILZSG), a rate that represented the third successive year of growth of around 2%. The bulk of the expansion that took place was centered on China, where output rose by 11.3% to 2.837 million tons, and

Average Prices of Source Metals

	2002	2003	2004	2005	2006	Change y-o-y
Lead ($/t)	453	516	888	976	1,288	32%
Zinc ($/t)	779	828	1,048	1,382	3,273	137%
Copper ($/t)	1,558	1,780	2,868	3,684	6,727	83%
Gold ($/oz)	310	363	409	444	604	36%

Source: LME, Reuters EcoWin

World Mine Production of Source Metals

(Thousand tons)

	2002	2003	2004	2005	2006	Change y-o-y
Lead	2,831	3,111	3,128	3,423	3,446	1%
Zinc	8,904	9,520	9,733	10,127	10,359	2%
Copper	13,583	13,686	14,648	14,984	14,953	0%
Gold (tons)	2,612	2,620	2,492	2,550	2,471	-3%

Source: ILZSG, ICSG, GFMS

in India, which registered a 13.2% increase to 505,000 tons. The slow response by the mining companies is reflected by a further contraction in treatment charges as smelters actively compete for the limited availability of concentrate. Similar trends are also apparent in the copper and lead markets reflecting the strong bargaining position of the mining companies.

A supply response to the exceptionally high level of zinc prices is slowly starting to emerge as a number of idled operations are restarted. This trend is reflected in ILZSG data, which shows a 7% year-on-year increase in global mine output in the first three months of this year. Teck Cominco reactivated the Lennard Shelf operation in Western Australia in April 2007. In the United States, the Balmat mine has recently been brought back on-stream. In Canada, a number of relatively small-scale operations including Duck Pond, Gays River, Langlois and Caribou are in the process of being commissioned. Crucially from the silver market's perspective, however, a number of these projects have no, or low, silver values.

However, the mine expansions underway in South America will contribute to sharply higher silver output. The single most important project is Apex Silver's San Cristobal project in Bolivia that will produce 185,000 tons per year of zinc and 85,000 tons per year of lead in addition to 22.3 Moz (694 t) of silver annually over its first five years of production. Mining activity is also increasing sharply in Peru with lead and zinc output in the first quarter of 2007 up 14% and 18% respectively.

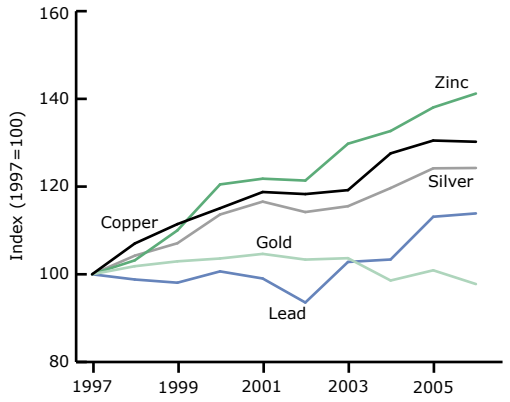
The lead industry, in particular, highlights the impact of supply disruptions associated with an industry operating at full capacity. In 2006, global mine output rose by just 0.6% to 3.446m tons. The loss of output was centered on Australia, the world's second largest producer, where concentrate output fell by nearly 15% to 617,000 tons. All the leading producers – BHP Billiton, Xstrata, Zinifex and CBH Resources – experienced difficulties in the second half of 2006.

The commissioning of Ivernia Inc's Magellan mine in Western Australia, which has a capacity of 100,000 tons per annum, has been plagued by problems. Technical difficulties associated with the installation of a ball mill affected output in 2006, while environmental problems in 2007 led to the mine being put on a care and maintenance basis. However, in common with a number of the latest generation of lead and zinc projects, Magellan does not yield any silver.

There is the potential for more rapid growth in lead concentrate production in 2007 as the technical problems experienced in Australia in 2006 are slowly resolved. As a result, by-product silver output in the country should rebound. In addition, Chinese mine production should continue to expand rapidly following the 9.5% increase in 2006. Initial figures for the first quarter of 2007 point to a 9.6% increase in concentrate output.

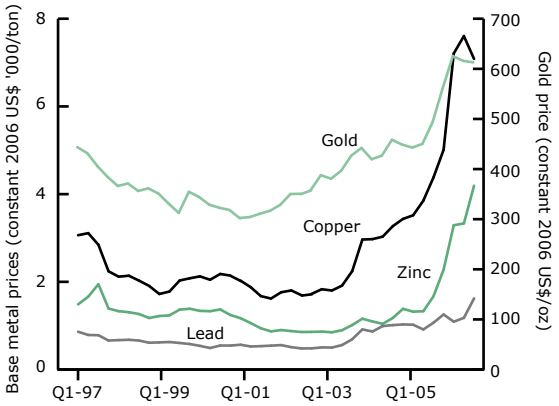
The copper industry provides another example of how technical problems, labor disputes and delays to new projects have combined to restrict mine supply. In 2006, world copper concentrate output declined by 0.2% as

Source Metal Mine Production



Source: ILZSG, ICSG, GFMS Metals Consulting, GFMS

Source Metal Prices (real terms)



Source: GFMS

problems surfaced in a number of countries. Disruptions at Freeport's Grasberg mine contributed to a 23% decline in Indonesian copper mine output last year to 816,000 tons. Labor disputes were primarily behind the 22% decline in Mexican output. Production in Chile, by far the largest producer accounting for over a third of total output, was largely unchanged as technical problems, lower grades and strikes offset the impact of new capacity.

Production growth should resume in 2007 reflecting a number of capacity expansions and higher utilization rates. In some areas, such as the African copper-belt, where output is recovering from a low base, this will have no impact on silver supply. However the prospect of higher supply at Grasberg in Indonesia and the expansion of Escondida in Chile will contribute to higher by-product silver output.

Production Costs

• ***World silver cash costs contracted by 16% last year as rising metal prices led to a significant increase in by-product credits.***

Cash costs at primary silver mines fell last year by a measured $0.51/oz to a weighted average $2.74/oz. GFMS assess silver costs on a by-product accounting basis and analysis is focused on primary silver production only. Although this statistic only encapsulates 13% of global silver mine production, it should be borne in mind that more than 70% of silver output is derived as a by-product of other metal mining. Of the sub-set of primary

Silver Output by Source Metal

(million ounces)

	2005 Output	% of Total	2006 Output	% of Total	Change y-o-y
Primary	179.0	28%	161.4	25%	-10%
Gold	81.3	13%	85.9	13%	6%
Copper	167.9	26%	170.1	26%	1%
Lead/Zinc	203.5	32%	211.5	33%	4%
Other	13.9	2%	17.2	3%	24%

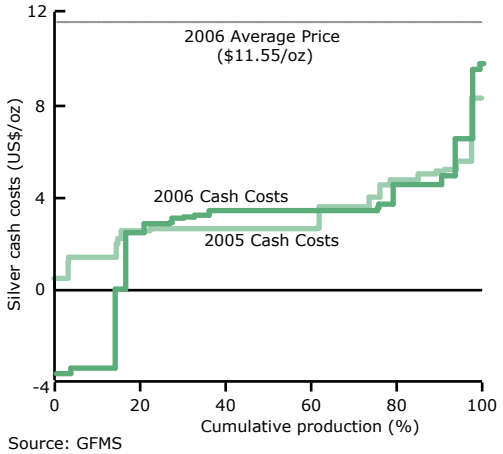
Source: GFMS

silver production, the costed population represents roughly 53% of the total.

The decline in costs of 16% year-on-year is particularly notable given the global inflationary pressure on mining materials and services, including higher energy and labor charges. To compare with the gold mining sector, as detailed in GFMS' *Gold Survey 2007*, industry-wide costs over the same period increased by 17%. A major factor in the silver mining sector's decline is the widespread presence of by-product credits at primary silver mines that have increased markedly in the last year, thanks to the continued commodities boom; the value of secondary lead, gold, copper and zinc production (assuming sales at average annual spot prices), has, as tabled on page 29, risen by 32%, 36%, 83% and 137% respectively.

Identifying a few of the most influential mines in the worldwide decline to costs, at Rio Tinto and Hecla's significant Greens Creek mine, per ounce costs fell by almost five dollars to a negative $3.47/oz, explained by the above-mentioned rises in lead, zinc and gold credits (in spite of modest production declines of these metals).

Silver Cash Costs



Source: GFMS

Silver Mine Production Costs

	2004	2005	2006
Cash costs	$2.61	$3.25	$2.74
Average spot price	$6.66	$7.31	$11.55
% output with costs > spot price	0%	2%	0%
Sample size (million ounces)	80.8	87.4	86.1

Source: GFMS

It was Pan American's Morococha mine in Peru, however, that took the title of lowest cost silver mine recorded in this *World Silver Survey,* with full year cash costs reported at a remarkable negative $3.71/oz, a greater than six dollar reduction year-on-year.

At the other end of the spectrum, the higher cost mines of significance included Galena, where production has been in decline with a consequent upward ratcheting of unit costs. In the first five months of 2006 for which data is available, costs were $9.75/oz, before the property was sold to US Silver Corporation in June. At First Majestic's San Martin in Mexico, costs were also relatively high, but nevertheless, remaining well below spot prices. Providing some offset against the global reduction, the significant Uchucchacua mine also saw a moderate rise to costs in 2006.

Producer Hedging

• ***The delta-adjusted silver hedge book at end-2006 stood at a measured 82.0 Moz (2,549 t), representing an 8% decline from the revised position at end-2005.***

Producer hedging activities generated a provisional 6.8 Moz (211 t) of demand in 2006, a swing from the revised figure of 27.6 Moz (859 t) of supply measured in the previous year. Given the 58% increase in the annual average silver price, and the fact that a large part of silver production is generated as a by-product of gold and base metal operations, and hence regarded (by this group of producers) as a less "strategic" metal, the modest cut in the outstanding global silver hedge book was perhaps slightly surprising.

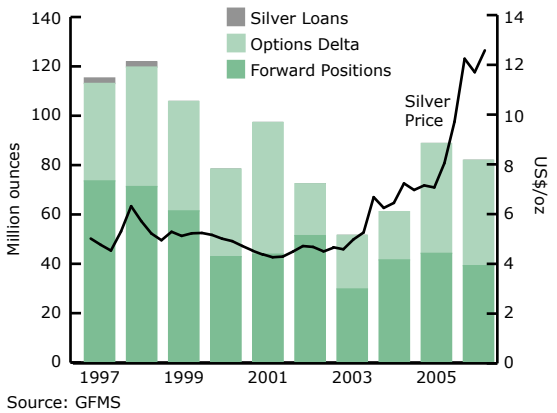
Part of the explanation behind the decline in the book was a continued shift in hedging practices, which has seen a number of producers lock in silver prices for future production using silver purchase agreements rather than the (relatively illiquid) forward market. A further consideration was the high price volatility, which led some traditional silver hedgers to pause for thought in the approach that their hedging program should take. As a result this set of producers did little in the way of fresh hedging during 2006.

Lastly, the impact of project hedging, which boosted the outstanding hedge book in 2005 (chiefly Apex Silver's hedge against future production at San Cristobal in Bolivia), was less of a feature in 2006. Moreover, and as alluded to above, some project hedging was effectively concluded "off market" as part of silver purchase agreements with unhedged listed counterparties.

Noteworthy fresh hedges last year included: the conclusion of Bema Gold's project related hedge, which it had initiated in 2005, at Kupol in Russia; an increase in the volume of purchased puts at KGHM Polska Miedź and finally, and the largest of the three hedges in terms of its physical market impact, Boliden's extension of its hedge program connected with the investment in Aitik for copper, lead, silver and gold. The expansion at Aitik, one of Europe's largest copper mines, was approved in October 2006 and, if all of the environmental permits are granted, should double capacity at the mine by 2010.

Buy backs, a consistent feature of de-hedging in the gold sector, was also a somewhat surprise contributor to last year's decline in the silver hedge book. Specifically, Barrick Gold closed out both the gold and silver hedge book that it inherited from its acquisition of Placer Dome in a deal that was concluded in March 2006.

Producer Hedging: Outstanding Positions



Source: GFMS

Sensitivity of the Options Book (Moz, end-2006)

Change in Volatility (%)	Move in Silver Price ($/oz)				
	-6	-2	0	2	6
4	34.4	40.3	42.3	43.3	44.3
2	34.0	40.4	42.3	43.3	44.3
0	33.5	40.4	42.4	43.3	44.3
-2	32.9	40.5	42.4	43.3	44.3
-4	32.3	40.5	42.5	43.3	44.4

Source: GFMS

Twelve-month Hedge Conditions*

	2003	2004	2005	2006
Spot Price	$4.88	$6.66	$7.31	$11.55
Libor	1.4%	2.1%	4.0%	5.2%
Lease Rate	0.7%	0.9%	1.8%	1.7%
Contango	0.7%	1.2%	2.2%	3.5%
Forward Price	$4.91	$6.74	$7.47	$11.79
Premium	$0.03	$0.08	$0.16	$0.24

*12-month averages

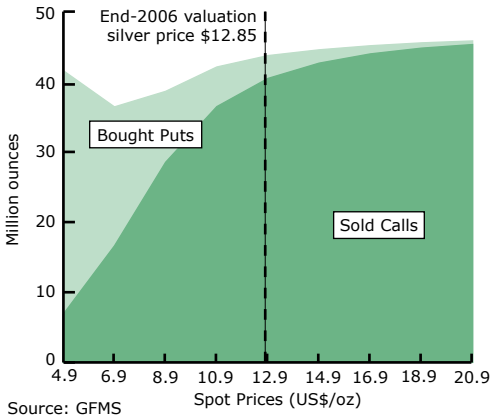
Source: GFMS

Before turning to examine the composition of the silver hedge book, it is worth outlining the growth in silver purchase agreements that, as outlined above, have contributed to the lackluster growth in the hedge book. The general structure of purchase agreements involves counterparties making an up front payment and thereafter a fixed price per ounce of silver delivered under the contract (subject to an inflationary adjustment). Looking back to 2005, in May Coeur d'Alene completed a deal with CBH Resources to acquire silver resources at the latter's Endeavor mine, while in September a similar deal was completed with Perilya which had sold 17.7 Moz (551 t) of payable silver to Coeur from the company's Broken Hill mine. In 2006, major deals included, Silver Wheaton's announcement in February 2006 that they had extended their existing silver purchase agreement with Goldcorp's Luismin mines and a few days later the report that they had agreed to purchase 4.75 Moz (148 t) per annum for a period of 20 years from Glencore International. Silver Wheaton has continued to actively grow their portfolio over recent months and in April 2007 the company announced that they had acquired 25% of life of mine silver production from Goldcorp's Peñasquito Project. Later it reported that it had agreed to purchase all of the silver produced by Hellas Gold, a 65%-owned subsidiary of European Goldfields Limited.

The composition of the global silver hedge book in nominal terms was little changed year-on-year with forwards accounting for 31%, net calls and net puts respectively accounting for 35% and 34% of the total. Despite the fact that in nominal terms bought puts modestly outnumbered the volume of sold calls, in delta adjusted terms the reverse was true with the net call delta hedge amounting to 39.8 Moz (1,239 t) compared to the net put delta hedge of 2.5 Moz (79 t).

To explain the position outlined above, the chart below (generated by the Brady Trinity™ integrated trading and risk management system) plots the profile of the delta hedge by contract type at different spot prices, the responsiveness of which is solely the result of changes in the delta of the options contracts. To illustrate the broadly polar response of the delta against the sold calls and bought puts to changes in the spot price, the modeling has been split on a contract basis.

End-2006 Delta Adjusted Options Position



Source: GFMS

As the silver price used to value the sold call options contracts declines from $20.9/oz to the spot price at end-2006 of $12.85/oz, the delta hedge declines from 45.0 Moz (1,409 t) to 40.5 Moz (1,259 t). Further reductions in the spot price to $4.9/oz result in the contraction of the sold call delta hedge to 6.9 Moz (213 t). The purchased put option delta hedge behaves in a divergent manner with the maximum position across the profile of 34.7 Moz (1,079 t) at a spot price of $4.9/oz. With $2/oz increments the bought put delta hedge steadily declines reaching a low of 0.5 Moz (16 t) under a spot price of $20.9/oz.

5. Supply from Above-Ground Stocks

- ***Supply from above-ground stocks fell by 4% in 2006 to reach 194.4 Moz (6,047 t).***

- ***The decline was the result of a shift of net producer hedging to the demand side.***

- ***A marked increase in sales from Russia was the main driver of the 18% increase in net government sales recorded last year.***

- ***Further increases in Indian scrap were largely offset by marked declines in recovery elsewhere, resulting in an essentially unchanged global figure.***

Net Silver Supply © GFMS Ltd / The Silver Institute

(Million ounces)

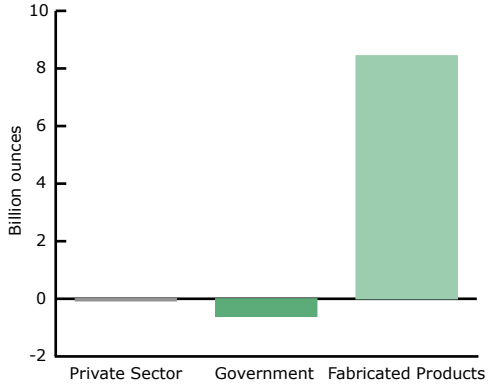
	2005	2006
Implied Net Disinvestment	-77.2	-64.5
Producer Hedging	27.6	-6.8
Net Government Sales	65.9	77.7
Sub-total Bullion	16.3	6.4
Old Silver Scrap	186.4	188.0
Total from Above-Ground Stocks	**202.7**	**194.4**
Mine Production	**645.7**	**646.1**
Total Supply	**848.3**	**840.5**

Overview

Supply of silver to the market can be broadly divided into two categories, namely supply from new mine production and supply from above-ground stocks. The latter comprises scrapped fabricated products as well as sales from private and government owned stocks of silver bullion.

The accompanying table features the net contribution to supply from each of the components included in the above-ground stocks category, namely implied net (dis)investment, net producer (de-)hedging, net government sales of silver bullion and scrap supply.

Changes in Above-ground Stocks (1997-2006)



Source: GFMS

Moreover, the table features supply from newly mined silver to generate an alternative measure of total supply of silver to the market, net of any increases in bullion stocks identified in the market.

Using this definition of supply, at 646.1 Moz (20,095 t), mine production, which is discussed in detail in Chapter 4, accounted for 77% of total supply over the course of 2006. (Note: on the basis of the definition of supply featured in Table 1 on page 7, mine production accounted for 71% of total supply last year.) The balance was taken up by silver sourced from above-ground stocks, including scrap supply and net government sales, net producer de-hedging and implied net investment.

Starting with net government sales in 2006, at 77.7 Moz (2,415 t), these were up a healthy 18% year-on-year, equivalent to 11.7 Moz (365 t). Sales from government stocks accounted for 9% of total net supply.

The principal driver of the rise in net government sales was the 14.0 Moz (437 t) increase in sales from Russian stocks. The modest year-on-year increase in Indian sales also contributed to the total. Sales from Chinese official and quasi-official stocks, on the other hand, registered further declines last year.

In contrast with gold, where the bulk of liquidity for the lending market is provided by central banks, the bullion involved in transactions related to changes in silver producers' hedgebook is almost entirely provided by

private sector stocks of the metal. Therefore, the 6.8 Moz (211 t) de-hedging recorded last year essentially translated into a net addition to private stocks of silver. Added to the 64.5 Moz (2,006 t) implied net investment figure derived for the year, this marked a 71.3 Moz (2,217 t) inflow into privately held stocks of silver bullion. (Note that this analysis excludes newly minted bullion coins that are treated separately within fabrication demand.)

Combining this inflow with the decline in government owned stocks generates a 6.4 Moz (199 t) net supply from bullion stocks in 2006, less than half the revised figure GFMS estimate for the previous year. The decline was the result of a swing in net producer hedging to the demand side, partly offset by lower implied net investment and higher net government sales.

The final component of supply from above-ground stocks of silver is supply from scrap. A significant portion of silver scrap supply continues to come from the recycling of photographic materials, although the portion this accounts for has been on a downward trend, largely due to the decline in photographic fabrication demand. The balance is accounted for by silver recovered from jewelry and silverware, electronic and other industrial products as well as silver coins. This comes in contrast to the gold market, where the bulk of scrap material comes from jewelry.

As a result, silver scrap supply is normally related to non-price factors, such as the performance of the relevant market and environmental legislation. Although the dramatic price rise seen last year did, to some extent, lead to increased recovery from what normally are price-inelastic sources, but, with the exception of India, the market was far less sensitive to the price rally than, say, the gold market (where in 2006 scrap rose by 25%).

GFMS' estimates saw global scrap supply in 2006 remained essentially flat year-on-year. This was the result of a marked increase in Indian scrap (amounting to 6.4 Moz or 200 t), which was largely offset by declines elsewhere (notably in Europe and North America).

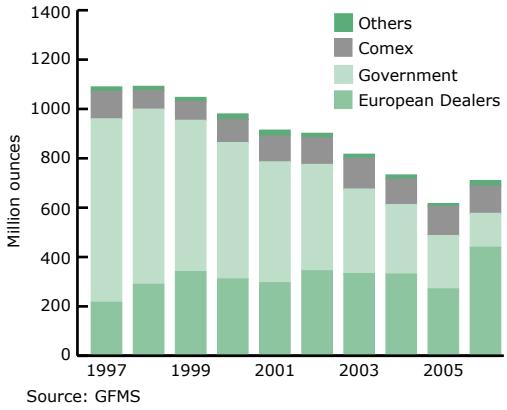
Identifiable Bullion Stocks

Identifiable bullion stocks rose over the course of 2006. It is interesting to note that since 1990, which marks the beginning of GFMS' series on identifiable bullion stocks, there has only been one other occasion when an increase took place, in 1998, and that was of limited magnitude.

Our analysis of identifiable stocks includes inventories for which sufficient evidence is available to form a statistical picture. The data discussed in this section therefore excludes the large amount of silver bullion held in non-recognized depositories or in private individuals' vaults and safety deposits. These additional stocks - believed to be widely dispersed - cannot be accurately quantified.

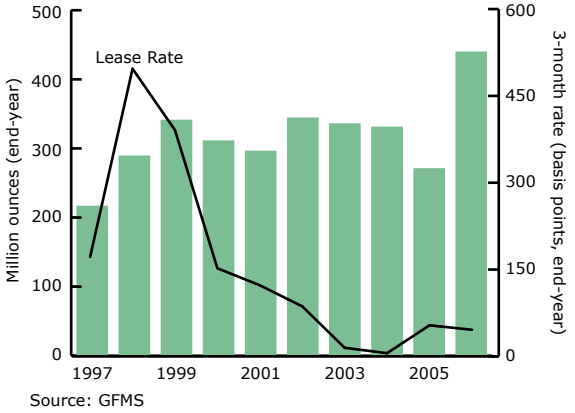
The table on page 35 and the chart below features the levels at which identifiable bullion stocks of silver stood at year-end. In total, identifiable bullion stocks grew by 92.6 Moz (2,879 t) last year. The increase was more than accounted for by the 168.9 Moz (5,253 t) rise in European dealers' stocks and, to a much lesser extent, inflows into identifiable Japanese silver stocks. These increases were

Identifiable Bullion Stocks



Source: GFMS

Bullion Stocks in Dealers' Vaults in Europe



Source: GFMS

Identifiable Bullion Stocks

(Million ounces)

	end-2005	end-2006
European Dealers	270.5	439.4
Comex	120.0	111.1
Government	214.8	137.2
Other Stocks	11.2	21.4
Total	**616.4**	**709.0**

Source: GFMS

Comex Silver Stocks (end period)

(Million ounces)

	Q1	Q2	Q3	Q4
2004	122.1	118.4	107.8	103.6
2005	103.6	104.7	116.7	120.0
2006	125.0	102.3	105.2	111.1
2007	125.8			

Source: Comex

partly offset by continued sales from government stocks, amounting to 77.7 Moz (2,415 t), and the 8.9 Moz (277 t) decline in stocks held at Comex depositories.

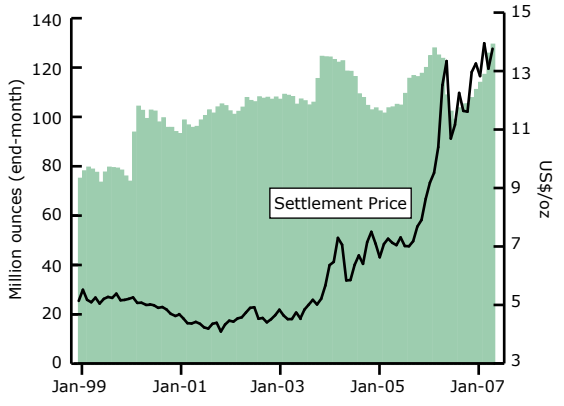
It is finally worth noting that, given the market having remained at a fundamental deficit (fabrication net of scrap having once again exceeded mine production, albeit barely), the rise discussed above by implication suggests a move of silver bullion out of unidentifiable stocks and into identifiable ones took place last year.

European Dealers' Stocks

Since 1996, GFMS has conducted a confidential survey of bullion stocks held in European dealers' vaults and has reported an aggregate end-year total for these in the *World Silver Survey*. At the end of last year, combined European dealers' silver stocks had grown by an impressive 168.9 Moz (5,253 t) from their end-2005 level. The main driver of this growth was the inflow of 121.1 Moz (3,768 t) into the iShares silver exchange traded fund (ETF) that was launched in April last year. As explained in the dedicated focus box on page 20, the product's holdings translate into allocated positions and the silver ETF's prospectus suggests that these positions (or at least much of them) are held loco-London. In addition, the weakness of Indian demand, coupled with continued sales of government silver, led to an 85% decline in silver imports into the country. As India tends to source metal from dealers located in Europe, this provided an additional boost to the stock levels discussed above (for instance, the United Kingdom became a net importer of silver from India over the year).

It is finally interesting to note that, although in respect of confidentiality GFMS cannot disclose a breakdown between allocated and unallocated stocks, there was a clear shift from the latter and into the former over the course of the year. This was largely due to the new silver ETF, but also marked a trend that spread over the wider silver investment market.

Comex Warehouse Stocks



Source: Comex

Comex Stocks

At the end of last year, stocks held at Comex depositories stood at 111.1 Moz (3,455 t), down by 8.9 Moz (277 t) on their end-2005 level. Data on trade flows between the United States and the United Kingdom (discussed extensively in Chapter 6), coupled with information collected through field research, suggests that this decline was in large measure related to a premium between the London and the New York silver prices, fueled by a shortage of metal loco-London during the run-up to and early stages of the silver ETF. From end-February to end-July, Comex stocks fell by 28.9 Moz (899 t).

In addition to the above, 2006 saw stock moves also take place between depositories. For instance, although stocks at the Delaware, HSBC Bank USA and ScotiaMocatta depositories fell by a combined net 12.7 Moz (396 t), those at Brinks Inc's vaults rose by 3.8 Moz (119 t).

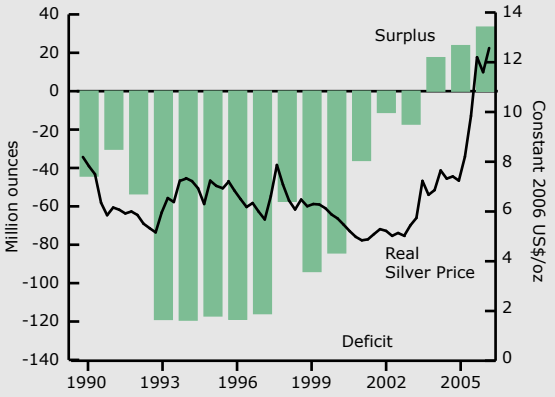
Deficits and Surpluses in the Silver Market

During the 1990s, the silver market saw a series of huge market deficits – defined as the difference between supply from mine production plus scrap and demand from fabrication (note that for this analysis, fabrication should exclude coin minting, which instead is treated as new bullion demand). These deficits were covered by the mobilization of above-ground bullion stocks, which were mainly in the form of private sector disinvestment until the latter part of the decade when government sales ramped up considerably.

As the graph shows very clearly, in the current decade the picture has changed considerably, with the deficit first dramatically shrinking in size and in the last three years being eliminated entirely as the market has shifted into a surplus. This surplus has of course entirely been in the form of a growth in investor holdings as government sales have continued over the period at a historically high level. (Investors' bullion inventories have in fact grown by an amount equal to the surplus plus the level of net government sales.)

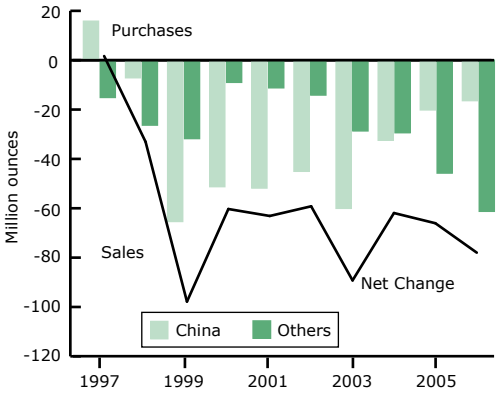
It is worth noting too that the shift from deficit to surplus has occurred at the same time as a significant rise in the real silver price. This may seem counter-intuitive to some. However, the explanation is fairly simple, as the 1990s decline in bullion stocks happened at a time when investors were generally shunning the metal and essentially dishoarding silver that had been accumulated in the 1970s and 1980s when investment in precious metals was very much in vogue. Conversely, the rise in bullion stocks in recent years is an indication of the return of investor interest, which has been the principal driver of higher silver prices over the period.

Silver Surpluses & Deficits



Source: GFMS

Changes in Government Stocks



Source: GFMS

Government Stocks

Government stocks of silver are estimated to have fallen by nearly 77.7 Moz (2,415 t) last year to reach some 137.2 Moz (4,267 t) by year-end. It should be noted that these estimates are largely based on private information GFMS have received in the course of our field research, as there is very little publicly available data on levels of and changes in government silver stocks. This is a particularly important caveat when it comes to the outstanding level of government stocks where our numbers are somewhat at the conservative end of the spectrum.

The one declared source of government silver sales in 2006 was once again India. The country disposed of nearly 27.8 Moz (864 t) last year, in the process reducing

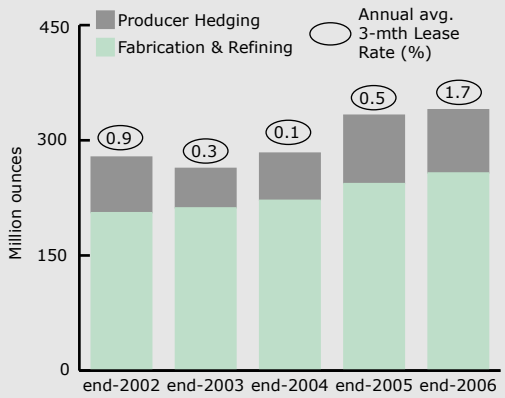
Silver Borrowing

Silver liquidity is mainly sourced from the private sector, in stark contrast to gold where such funding is principally provided by the central banks lending from their ample stocks. Another important difference between the white and yellow metals lies on the demand side of the equation, where producer hedging has never had the importance in silver that it once had in gold. Indeed, as the graph in this section shows, silver borrowing is dominated by fabricators and refiners of the metal.

Against this backdrop, the news that a silver ETF was to be launched caused great trepidation among industrial users of the metal, not only because it could drive prices higher but also due to its potential impact on silver leasing rates as a result of formerly available metal becoming allocated and therefore no longer accessible by the market.

Such fears resulted in a round of precautionary borrowing in advance of the product's launch that naturally brought about the very increase in silver borrowing costs that had been anticipated. For example, 3-month leasing rates rose steadily in the first few months of 2006 to reach a peak of 5% in May. Since then, and in spite of 121.1 Moz (3,768 t) of silver being allocated in the ETF at end-2006, leasing rates have dropped back substantially, with the average for 3-month silver falling to 0.3% in the fourth quarter, suggesting that there was plenty of liquidity in the market at the time, a fact that is borne out by the growth in European dealers' stocks.

Silver Borrowing



Source: GFMS

N.B. The above chart shows GFMS' estimates for the total amount of silver borrowed at year-end. This is split into two main categories, first, the quantity borrowed in relation to producers' outstanding hedge positions and, second, the amount of liquidity required by fabricators and refiners.

its stockpile to a trivial level. As was the case in 2005, the silver bullion sold by the authorities was mainly below commonly acceptable standards of fineness and therefore required upgrading. Our figures are based upon estimates of the fine silver content of this material.

In addition to India, there were substantial sales last year from two other sources – China and Russia – plus several other smaller disposals. Chinese sales in 2006 are thought to have totaled 16.4 Moz (510 t), a figure well below the peak levels seen in 1999-2004. In contrast, Russian sales increased substantially to reach an estimated 31.4 Moz (977 t). The explanation for this growth in sales would seem to be the attractive silver price. In the past, strategic stockpiles might be mobilized to raise foreign exchange but these days Russia's cash reserves are enormous due to the windfall from high oil and gas prices.

Other Stocks

The balance of identifiable silver bullion stocks comprises those registered on the Tokyo Commodities Exchange, the Chicago Board of Trade and Japanese trade stocks as reported by the country's Ministry of Trade and Industry. Due to their small volume, these are aggregated under the "Others" category, both in the table on page 35 and the chart on page 34. 2006 saw these stocks grow by 10.2 Moz (318 t), mainly due to an increase in Japanese trade stocks.

Scrap

• Rising supplies from jewelry offset further declines in photography, leaving world scrap supply little changed in 2006.

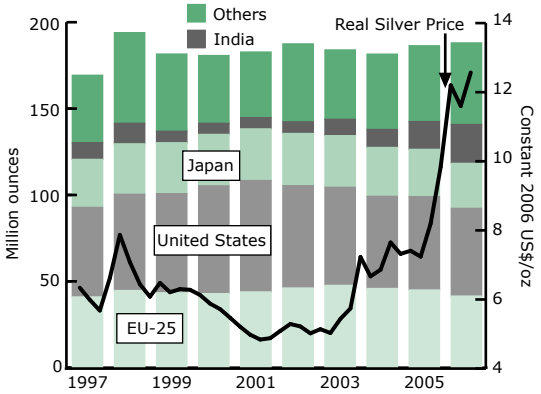
Last year, global scrap supply edged higher, with a 1% rise taking the total to 188.0 Moz (5,848 t). The fact that the supply of recycled material posted any year-on-year gain may have been unexpected given the structural decline in the supply of old photographic material (which has now been a feature for much of this decade) but significantly higher silver prices led to a sharp rise in jewelry scrap coming into the market. This was concentrated in the price sensitive markets, with India leading the charge with a gain of some 40% to what appears to have been a record level of scrap in 2006.

There were, however, isolated developments, which offset some of the gains from jewelry, notably a reduction in the recycling of ethylene oxide (EO) catalysts in the United States, together with a pronounced reduction in Germany's coin melt. Both had achieved higher than "normal" levels of recycling in 2005 in these areas and, with no repeat last year, scrap supplies in each industry declined noticeably. Looking ahead to this year, the expectation of continued strength in silver prices is likely to produce a further round of elevated levels of jewelry recycling. Moreover, industrial scrap supply is likely to continue rising, albeit at a steady pace, although this should be comfortably offset by continued erosion from photography. In addition, as alluded to above, other categories, in particular coin melt (where better categorized as scrap rather than disinvestment), are unlikely to make the same contribution as in recent years.

Japanese scrap volumes fell by just under 5% in 2006, continuing a trend that has now become firmly established on the back of sharply lower photographic scrap. Most of our contacts in the collection business report that photographic scrap was between 10% and 15% lower last year, and the expectation is that this could accelerate in the future. Partly offsetting this has been the secular rise in silver recovery from the electrical and electronics sectors (where both genuine old and process scrap quantities have risen steadily).

Last year in the **United States**, there was no repeat of what turned out to be a one-off rise in scrap supply

World Scrap Supply



Source: GFMS

in 2005 against a longer-term trend of steadily falling levels of recycled metal. In 2006, the supply of scrap from photography continued to fall although much of the decline was concentrated in the consumer film segment. Anecdotal evidence suggests that supplies from the medical sector held up relatively well largely because of federal laws which require X-rays to be held for a minimum of 3-5 years, thus guaranteeing a stream of material in the short to medium term. Staying with the photographic industry, the closure of an increasing amount of capacity in the United States has led to a marked reduction in process scrap volumes although, in terms of GFMS' definition of old scrap supply, this would be excluded from our data series.

Elsewhere, recycling of EO catalysts fell back last year. In many respects, this was a direct response to 2005's higher level of catalyst change-outs, which, in a number of cases, had been postponed from the previous year. As a result, in 2006, there was a return to a more "normal" run rate of EO change-overs, which compounded the decline in scrap from photography.

The flow of scrap into the **Indian** market rose by 40% last year to touch 22.5 Moz (700 t). At first sight, this is not surprising considering the spectacular 61% rise in the rupee silver price, although this outturn stands in stark contrast with the Indian gold market where rising prices in 2006 were accompanied by falling scrap volumes.

GFMS field trips point to much of this additional scrap having come from the rural areas, although our contacts in the main urban conurbations also reported higher flows during the price spikes. Quite why rural silver scrap flows

Table 3 - Supply of Silver from the Recycling of Old Scrap (million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Germany	16.1	16.4	16.1	16.7	16.8	16.7	19.0	18.3	17.6	13.6
UK & Ireland	8.4	10.8	11.5	10.9	11.1	13.6	13.0	12.4	11.6	10.9
Italy	3.4	4.7	3.4	3.4	3.5	3.6	3.6	3.3	4.3	5.1
France	4.3	4.1	4.0	3.5	3.9	3.9	4.1	3.8	4.1	4.5
Austria	1.8	1.8	1.7	1.6	2.0	1.9	1.5	1.6	1.3	1.3
Netherlands	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.3
Sweden	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	0.9
Belgium	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.6
Denmark	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.5
Czech & Slovak Republics	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4
Spain	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Portugal	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4
Finland	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Norway	1.0	0.8	0.9	1.1	0.7	0.7	0.5	0.3	0.3	0.3
Switzerland	0.8	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other Countries	1.2	1.2	1.2	1.1	1.1	1.2	1.1	1.1	1.0	1.0
Total Europe	**42.7**	**45.9**	**44.6**	**44.2**	**44.8**	**47.1**	**48.4**	**46.5**	**45.6**	**42.0**
North America										
United States	51.8	55.7	57.4	62.4	64.5	59.2	56.8	53.3	54.0	50.8
Mexico	4.3	10.6	2.3	1.5	1.4	1.5	1.8	1.9	2.1	2.3
Canada	1.6	1.9	1.6	1.4	1.4	1.4	1.5	1.4	1.5	1.4
Total North America	**57.7**	**68.3**	**61.3**	**65.4**	**67.3**	**62.2**	**60.1**	**56.7**	**57.5**	**54.5**
Latin America										
Brazil	1.6	1.6	1.8	1.5	1.6	1.0	1.2	1.0	1.0	1.0
Argentina	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.8
Chile	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
Other Countries	0.7	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.9	1.1
Total Latin America	**3.4**	**3.7**	**3.7**	**3.4**	**3.5**	**2.8**	**3.0**	**2.8**	**3.1**	**3.4**
Middle East										
Saudi Arabia & Yemen	3.2	2.1	7.5	2.3	0.8	7.2	0.7	1.3	1.6	1.8
Turkey	1.6	1.7	1.4	1.3	1.3	1.4	1.7	1.7	1.7	1.6
Egypt	0.3	0.4	0.3	0.9	1.1	1.3	1.1	1.4	1.4	1.5
Oman	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other Countries	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.5	0.4	0.5
Total Middle East	**5.7**	**4.7**	**9.7**	**4.9**	**3.7**	**10.4**	**4.1**	**5.0**	**5.2**	**5.6**
Indian Sub-Continent										
India	9.6	11.9	6.7	6.4	6.4	6.8	9.5	10.4	16.1	22.5
Other Countries	0.3	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
Total Indian Sub-Cont.	**10.0**	**12.4**	**7.0**	**6.8**	**6.9**	**7.2**	**9.9**	**10.9**	**16.6**	**23.1**
East Asia										
Japan	27.8	29.2	29.5	29.8	29.9	30.2	29.9	28.3	27.4	26.0
China	4.6	5.8	5.9	6.0	6.2	6.3	6.6	7.7	8.7	10.4
South Korea	3.6	7.8	5.3	5.3	5.5	5.8	6.1	6.3	6.4	6.7
Thailand	0.8	1.0	0.8	0.6	0.7	0.9	1.0	1.0	1.0	1.1
Taiwan	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1
Singapore	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
Hong Kong	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Indonesia	0.4	0.4	0.4	0.5	0.4	0.3	0.3	0.4	0.4	0.4

Table 3 - Supply of Silver from the Recycling of Old Scrap (million ounces) © GFMS/The Silver Institute

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Vietnam	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4
Philippines	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Malaysia	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total East Asia	**39.3**	**46.6**	**44.1**	**44.5**	**44.9**	**45.8**	**46.3**	**46.2**	**46.4**	**47.4**
Africa										
Morocco	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.3	0.6	0.9
Other Countries	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6
Total Africa	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.0**	**1.1**	**1.8**	**1.2**	**1.5**
Oceania										
Australia	2.3	2.4	2.4	2.4	2.4	2.3	2.1	2.0	1.8	1.7
Total Oceania	**2.3**	**2.4**	**2.4**	**2.4**	**2.4**	**2.3**	**2.1**	**2.0**	**1.8**	**1.7**
CIS										
CIS	7.1	8.8	7.7	7.9	8.1	8.5	9.0	9.5	9.0	8.9
Total CIS	**7.1**	**8.8**	**7.7**	**7.9**	**8.1**	**8.5**	**9.0**	**9.5**	**9.0**	**8.9**
World Total	**169.3**	**193.9**	**181.6**	**180.7**	**182.7**	**187.5**	**183.9**	**181.5**	**186.4**	**188.0**

rose so markedly while gold scrapping remained subdued is not clear, but there have been suggestions that an erratic monsoon affected silver consuming areas more than gold consuming ones. What is not in doubt is that there is a crisis in parts of the rural economy, reflected in the well-documented surge in suicides of debt-ridden farmers. What appears to have happened last year is that in those segments of the rural economy that have been struggling (in spite of other sectors having done very well in 2006), distress sales of silver rose.

In contrast to the global trend, **European** scrap fell in 2006, down 8% to 42.0 Moz (1,306 t). However, this outcome is overwhelmingly driven by the slump in coin melt in Germany and, if that country is excluded, the change for Europe switches to a rise of 1%, a result identical to the world figure.

As noted above, the fall in scrap for **Germany** of around a fifth was largely the product of a slump in coin melt as the minting of fresh coins reverted to the more normal situation of only a small slice of offtake being covered by scrap after two years of very high coverage by the melt of old coins. Photographic scrap also continued to fall noticeably, if by somewhat less than once expected. Recovery from liquids has retreated strongly but yields from film, for example X-rays, has been quite stable, seemingly as a result of enhanced collection rates. Jewelry and electronic scrap, however, grew strongly. The pace of growth for the latter was particularly robust as yields stopped falling sharply at the same time as gross volumes grew markedly. The absolute amount of metal recovered, however, remains limited. This remains the case even if we include metal won from the substantial amounts of imported electronic scrap.

The **United Kingdom** also saw a drop in total scrap in 2006, if by a much more modest amount of just over 5%. This decline was chiefly driven by a fall in photographic scrap, with the principal area of loss being on the consumer side.

In contrast, **Italian** and **French** scrap rose quite notably, respectively by around a fifth and a tenth. Italy was not immune from a slide in photographic scrap, though losses here seem very slight, but this was easily outweighed by a jump in jewelry and silverware scrap. This peaked in the second quarter last year as fabricators remelted unsold inventory to ease credit lines or assist cash flow. It was almost never for profit as the rise in value of contained metal was invariably far less than lost labor. Imported scrap rose yet more strongly (though this is not included in the Italian figure as scrap is calculated basis country of generation, not refining). This was dominated by jewelry but higher receipts of photographic, electronic and coin scrap were noted too. Increased jewelry scrap was important for the rise in scrap seen in France, though coin melt was also significant.

6. Silver Bullion Trade

- ***The most notable shock to global silver bullion flows in 2006 concerned India. GFMS estimate that the country's imports fell 84% to only 17.2 Moz (535 t), with all of this being shipped in the final four months of the year.***

- ***Shipments of metal into the London terminal market rose markedly in 2006 on the back of rising prices, arbitrage opportunities and growing investment demand.***

- ***Bullion shipments into the Middle East fell sharply last year with Turkey, Egypt and Dubai recording substantially lower imports.***

- ***The official Chinese export quota for 2006 rose by over 14% to 128.6 Moz (4,000 t). However, the true magnitude of exports from China to the rest of the world remains clouded by round-tripping between the mainland and Hong Kong.***

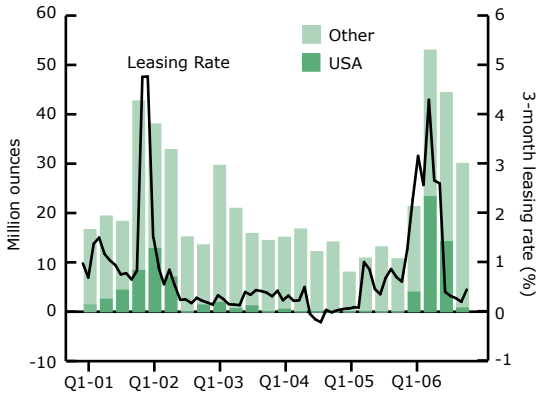
Europe

Europe has a large structural deficit in silver thanks to its sizeable fabrication (some 190.1 Moz or 5,913 t in 2006) being far in excess of mine output (52.6 Moz or 1,635 t) and scrap (42.0 Moz or 1,306 t last year). This necessitates substantial imports and these typically arrive as refined bullion, concentrates, doré and, to a lesser extent, old scrap. The picture is complicated by the role that London and Zurich play as major bullion trading centers. The former saw major imports from the United States in 2006 and, as a result, total bullion imports into Europe are thought to have risen last year. The two other substantial importing countries are Germany and Italy, though their trade is dominated by intra-European flows.

Despite the structural deficit, silver bullion exports from Europe are typically sizeable, with the trade dominated by Switzerland and the United Kingdom. Total bullion outflows last year look to have fallen notably, largely due to the slump in UK shipments to India.

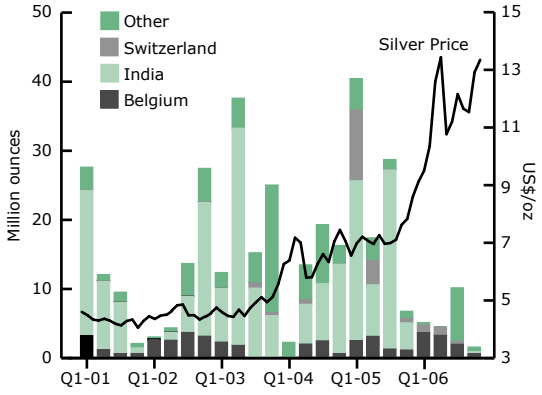
The decline in **UK** silver bullion imports in 2004 and 2005 reflected a reduction in the country's refining capacity. However, last year saw a jump in shipments, to their highest level since 1998, the product of two separate developments. Firstly, arbitrage opportunities between London and New York led to a substantial flow of metal into London (see the section on North America below for more detail on this). Secondly, a collapse in Indian imports, a feature for much of last year, resulted in an inflow of material into London's terminal market, which was no less significant than the arbitrage-related import of bullion. China, which in 2005 was India's third largest source for bullion, accounted for much of the growth but, in spite of a recent increase in the country's number of LBMA-accredited refineries, a significant share of the material brought into London originated from

UK Bullion Imports



Source: GFMS

UK Bullion Exports



Source: GFMS

non-accredited facilities, which was therefore re-refined (either in the United Kingdom or in continental Europe). The weakness in Indian demand also led to a re-routing of metal from the CIS to London and it was also noteworthy to see a relatively modest quantity of bullion imported directly from India.

The fact that, in 2006, the United Kingdom was a net *importer* of bullion from India explains why UK silver bullion exports were around 70% lower year-on-year. In 2005, roughly 40 Moz (1,250 t) of material was shipped to the Sub-continent. In contrast last year, deliveries to India barely registered at a paltry 1 Moz (30 t). As an aside, exports to Belgium were slightly higher last year due to a rise in the country's production of silver nitrate.

Being home to some of the world's principal refineries, **Switzerland** is a recipient of major inflows of mine production and, in its role as a terminal market, refined metal. Total imports are said to have declined last year, although field research suggests that deliveries from Russia rose noticeably. This occurred in spite of a fall in the country's mine production, with much of the increase in supplies from Russia thought, therefore, to have stemmed from a rise in its government sales. Total Swiss exports are also understood to have fallen, largely through lower shipments to fabricating countries such as Italy and India.

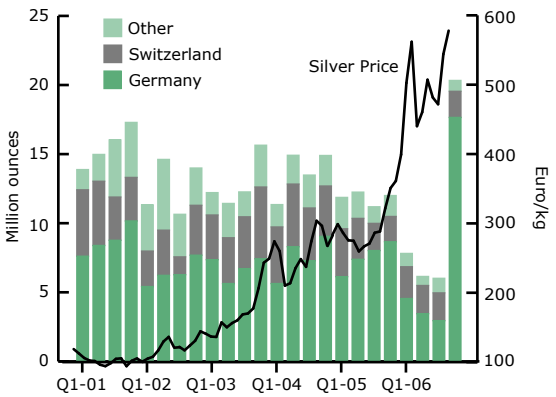
Published figures on official **Italian** bullion imports in 2006 show a drop of 10% to 42.7 Moz (1,329 t). Some industry sources commented that these numbers overstate true official inflows and indeed, on a price-adjusted basis, the fall is a little greater at 13%. The picture is at least not complicated by major exports and unofficial inflows are believed to have remained slight. The drop in total net imports therefore mirrors the 11% slip in jewelry and silverware demand (which account for around three-quarters of total fabrication). Additional supply, however, was provided by higher domestic and imported scrap.

Looking at monthly figures, the year-on-year slide in Italian imports unsurprisingly accelerated sharply in the first quarter as the price rally began. However, when prices retreated heavily after the May peak, imports essentially failed to respond until October. The reversal that then occurred was spectacular, with inflows that month surging to 15.6 Moz (487 t), or roughly seven times average monthly imports in the first nine months of 2006. Greater confidence in offtake and the price plus some enforced catch-up in advance of the Christmas jewelry sales peak, are thought to explain this swing.

Bullion imports into **Germany** in 2006 rose by 1% to 54.4 Moz (1,691 t), probably making it Europe's second largest importer. Broad stability was achieved largely as higher intra-EU inflows, for example from Poland, plus a jump in imports from Chile countered the decline in supplies from Kazakhstan. German bullion exports also rose last year, up 6% to 55.4 Moz (1,722 t), with EU homes taking just over 90% of the total.

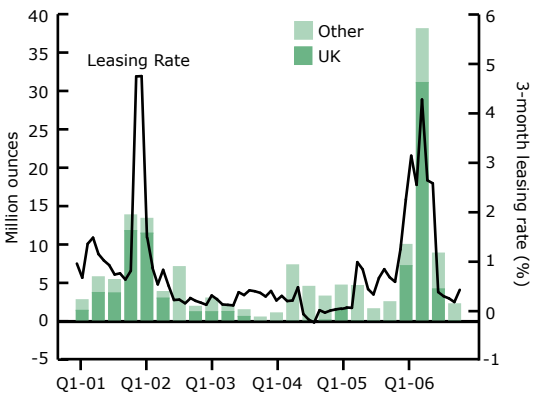
Turning to the **Commonwealth of Independent States** (CIS), estimates point to a considerable rise in exports of silver bullion, the growth in which appears to have been largely the result of higher sales of government stocks by Russia. Aside from a rise in net bullion shipments,

Official Italian Bullion Imports



Source: GFMS

US Bullion Exports



Source: GFMS

there was a marked change in export destination, with deliveries to India falling back sharply, to be largely replaced by exports to western Europe.

North America

In the **United States**, imports of silver bullion edged higher last year. The 3% rise, on a price adjusted basis, was due to growth in shipments from Mexico, Canada and, to a lesser extent, Chile, which offset lower deliveries from Peru. The increase in Mexican trade was of little surprise, given the country's growth in mine supply, but the growth in supplies from Canada and the reduction in Peruvian supplies were somewhat counter-intuitive given the respective performances of each country's mine output (Canada, down 9%; Peru, +8%).

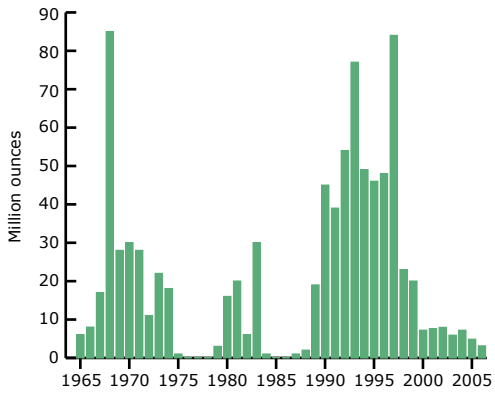
Turning to bullion exports, last year the most important development was the surge in deliveries, predominantly of good delivery bars, from the United States to the United Kingdom. The appearance of an arbitrage opportunity (with London at times producing a 13 to 15 cent premium over New York) was the result of strong loco-London demand (including in the OTC market), as well as a transfer from unallocated to allocated accounts in London, in the run up to the launch of the first silver ETF, plus healthy investor interest following its late April launch. In fact the premium actually peaked in May as the supply of unallocated metal in London declined further. A drawdown of Comex stocks proved to be the main source of the outflow (between end-February and end-June exchange stocks fell by 28.9 Moz or 899 t, to their lowest level since mid-2001). In total though, between March and July around 40 Moz (1,300 t) was booked into London's vaults. One reason why Comex did not fully account for all of the metal exported to London was that some exchange accredited bars did not meet the specification of London Good Delivery material, which resulted in either the use of other silver or the upgrading of some Comex bullion in the United Kingdom (although following capacity reductions in recent years, this option was seldom pursued).

Middle East and Indian Sub-Continent

In **Turkey**, bullion imports fell by some 50% to their lowest level since 2001. In the intervening period, the growth in silver imports has largely mirrored the rise in domestic jewelry fabrication and made up for any shortfall in domestic mine production (most of which is consumed locally). As a result, it was of little surprise to see, in the light of rising domestic mine production and falling jewelry and silverware output, a sharp fall in deliveries of imported bullion and grain onto the Istanbul Gold Exchange.

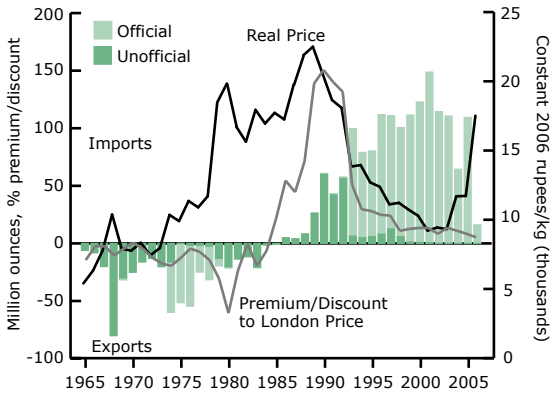
Official supplies of bullion and grain into the **Egyptian** market effectively disappeared last year, after falling (and subsequently remaining) at a low level during the previous two years. With jewelry demand only moderately lower last year, the near absence of imports during 2006 was primarily a function of the high import costs (totaling 21%, although, at the time of writing, they had been reduced to 16%), once again, not being reflected in local prices, which, for much of 2006, remained at close to international prices. The lack of a sufficient local market premium also discouraged unofficial imports and, furthermore, there is evidence

Dubai Bullion Imports



Source: GFMS

Net Indian Bullion Imports and Exports



Source: GFMS

to suggest that some unofficial imports was in fact not sold to fabricators, but instead retained, in the hope that Egyptian silver prices would eventually move higher, with the subsequent shortfall in the market met by higher scrap supply.

Silver bullion imports into the **United Arab Emirates** (UAE) fell by over one-third to their lowest level since 1988. However, import statistics for the UAE are often not a true reflection of local demand as bullion is often vaulted or trans-shipped from Dubai to other markets. However, available data suggests the single largest decline last year was from Russia, while imports from the United Kingdom and Hong Kong were also notably weaker.

GFMS estimates point to gross **Indian** silver imports having fallen by a spectacular 84%, to around 17.2 Moz (535 t), during 2006. At first sight, this steep slide was consistent with the price action during the year, with average local silver prices having risen 61% year-on-year. Notwithstanding this observation, however, the collapse in imports was startling, and not surprisingly there were other factors at work that explained the magnitude of this fall, namely scrap, de-stocking, and ongoing sales from government stocks.

Before looking at these influences on imports in turn, it is worth noting that for much of 2006 India actually shipped in no silver at all. To put this in context, it should be pointed out that India has imported, during peak periods of demand, upwards of 19 Moz (around 600 t) per month, but that GFMS data shows there were no imports of silver in the first eight months of last year. When imports did begin, in September, they were a mere trickle at just over 1 Moz (31 t), and although they did pick up later in the year, they peaked in December at a rather paltry 6.9 Moz (215 t).

Indian Bullion Imports

Moz	2002	2003	2004	2005	2006
OGL^	109.1	107.7	60.3	106.1	16.1
NRI^	0.1	0.1	0.1	0.1	0.1
SIL^	0.0	0.0	0.0	0.0	0.0
Replenishment**	4.8	2.9	4.0	3.1	1.0
Sub-total	114.1	110.6	64.4	109.3	17.2
Unofficial	0.0	0.0	0.0	0.0	0.0
Total Imports	**114.1**	**110.6**	**64.4**	**109.3**	**17.2**
Local Premium*	7%	12%	10%	7%	4%

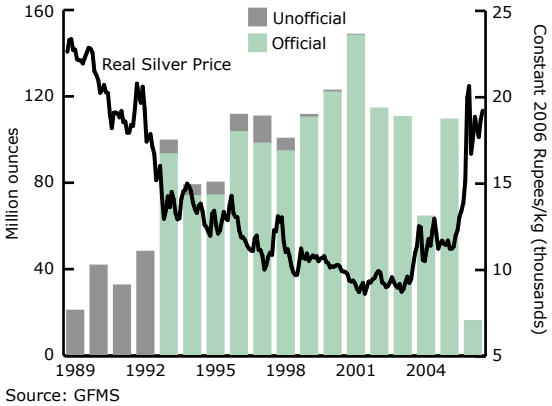
* percentage above London price at the official exchange rate (excluding all local duties and taxes)
** imports of silver bullion for manufacture and re-export
^ Open General Licence, Non-resident Indians, Special Import Licence

Source: GFMS

The primary reason for the collapse in imports in 2006 was the effect of the massive carry over of silver stocks from 2005. GFMS estimate that banks and agencies had accumulated stocks in the region of 48.2 Moz (1,500 t) at the end of 2005 on the back of expectations of strong demand that did not materialize (interestingly, imports into India in the last six months of 2005 amounted to over 50 Moz or 1,600 t). Of this stock, we calculate that around 38.6 Moz (1,200 t) was owned by banks and around 9.7 Moz (300 t) by agencies.

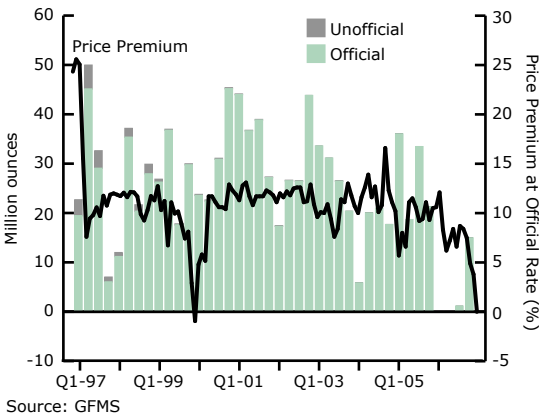
The observant reader may question why these institutions were willing to fund such high stock levels, and why they did not simply re-export this to the terminal market of

Annual Indian Bullion Imports



Source: GFMS

Quarterly Indian Bullion Imports



Source: GFMS

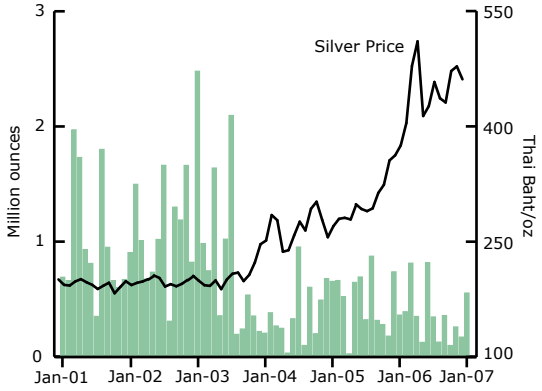
London. The primary reason for this was the 2% import duty incurred on imports of silver into India that typically cannot be recovered if the metal is shipped out. Having said this, we do believe that some re-exports were made in the first six months of the year (as these institutions weighed up the carrying cost of silver versus the loss of 2% plus shipping costs incurred upon exporting it back to London). GFMS' conservative estimate is that around 9 Moz (280 t) of silver was exported (although some of this may have been silver diverted from the high seas and not actually landed in India; the data is ambiguous in this regard). By the end of 2006, GFMS calculations suggest that around 14 Moz (436 t) of silver was left in stock, with the difference having been sold into the market, mitigating the need to import fresh metal.

Another contributor to lower imports was the continuing sale of government or so called "mint silver" (that began in 2005 by the nominated agencies). At the time of writing, GFMS data indicates that sales of mint silver were 27.8 Moz (864 t) (excluding carry-forward stock of 9.7 Moz (305 t) from the previous year that was still to be delivered). It should be noted that the sale of this silver has been mired in controversy, with a price dispute emerging between the government mint, the agencies and the buyers (not surprisingly due to the rising silver price). The immediate impact of this dispute was that supplies were sporadic through the year, and this is one reason that some imports were effected later in 2006, even as the silver price remained at elevated levels. For the record, the sale of mint silver was typically at a discount of Rs.1,000-1,100 per kg to the import parity price, with most of it finding its way directly to the manufacturing centers of payals (anklets) and other items where the quality of the metal was not an issue (invariably the mint silver being sold has been of poor quality). Small quantities were shipped to Jodhpur for refining into smaller local (choursa) bars and resold into the market. Finally, scrap volumes rose sharply in 2006 and this flow of metal also substituted for imports of fresh silver from the international market.

East Asia

The **Chinese** silver export quota issued by the Ministry of Commerce recorded a 14% rise year-on-year to 128.6 Moz (4,000 t) from the 112.5 Moz (3,500 t) set down for 2005. On a statistical note, the rise was generated from an increase in primary mine production (see Chapter 4) and growing by-product supply from base

Singapore Bullion and Semis Imports



Source: GFMS

metal concentrates, both from imported and domestic sources. Furthermore, in recent years, the introduction of stricter environmental legislation has led manufacturers to pay greater attention to the recovery of scrap material. Moreover, increasing precious metal prices have encouraged heavy industry to expand the recovery business, with the intention to profit from their own metal slags, as well as from imported supplies from non-ferrous metal producers.

As outlined in previous editions of the *World Silver Survey*, there has historically been a significant quantity of round-tripping of silver between the mainland and Hong Kong to reclaim the 17% Value Added Tax (VAT) on transactions, only to have the metal shipped back to China for the cycle to continue. In 2006, GFMS estimate that this trade exceeded 38.6 Moz (1,200 t) as this form of trade was rampant in the initial months of the year, as rumors were circulating in the market that the VAT rebate policy would be abolished so as to streamline the industry and to remove this illicit trade. Interestingly, this led to a surge of both official and unofficial shipments as traders attempted to capitalize on the loophole before it was closed, leading to large volumes of metal being shipped across the borders. However, a few months later, the Chinese government released the list of VAT exclusions and silver was surprisingly not included, resulting in an immediate slow down of mainland exports to a more normal pattern.

According to official trade data, the overwhelming bulk of Chinese silver exports are shipped via Hong Kong, with exports to the Asian entrepôt last year increasing by some 9%. Furthermore, direct shipments to Thailand

fell by nearly half and trade to India was notably weaker. In contrast, exports to the United Kingdom rose by 6.7 Moz (209 t) to 7.2 Moz (223 t), with the second and third quarters particularly strong.

A jump in silver bullion flows between **Hong Kong** and the Chinese mainland helped lift total imports by over 70% year-on-year to nearly 141 Moz (4,384 t), with the flow of silver from China more than doubling to nearly 128 Moz (3,976 t) last year. This sharp increase was led by Chinese base metal smelters and precious metal miners taking advantage of rising metals prices to offload production (often at a discount) to markets via Hong Hong's trading channels.

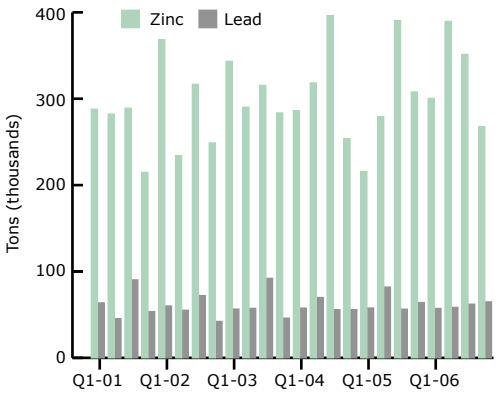
South Korean bullion imports surged 96% in 2006 to 9.2 Moz (286 t) on the back of a sharp rise in deliveries of Chinese material, while total exports reported a more modest increase of 16% to 35.3 Moz (1,098 t). Korea's industrial output, and more specifically the electronics sector, grew significantly last year, driven by robust global demand for electronic components. Moreover, the sizable supply of silver exacted from base metal concentrates by Korean-based smelters was insufficient to meet the growing demand, with fresh bullion required to meet the shortfall.

Following a stronger performance in 2005, **Singapore's** silver imports fell last year by 29% year-on-year. An increase in the availability of scrap may have contributed to the decline though it is far more likely that fabricating countries in the region were buying silver directly though Hong Kong or European sources instead of using Singapore as a conduit for their supply. In addition, imports from Australia were notably weaker, although this was largely offset by a rise in imports from China.

GFMS estimate that **Thailand's** bullion imports fell by over one-third, on a price-adjusted basis, in 2006 to an estimated 9.2 Moz (288 t) with imports from Poland falling over 80% for the year and Chinese silver also suffering a double-digit decline. As readers of previous *World Silver Surveys* may recall, the removal three years ago of a 7% tariff on silver imports into Thailand, introduced to reduce unofficial supply entering the country, had an immediate effect on the transparency of the industry. However, large volumes of silver are still estimated to be finding their way across northern borders for use in the Chang Mai region as well as in southern Thailand. Indeed, reviewing official Thai import statistics still does not provide an accurate illustration of the volume of silver entering the country. Turning to exports, reported bullion shipments rose notably last year, with increased flows to both Japan and Singapore suggesting scrap was the catalyst for such a substantial rise.

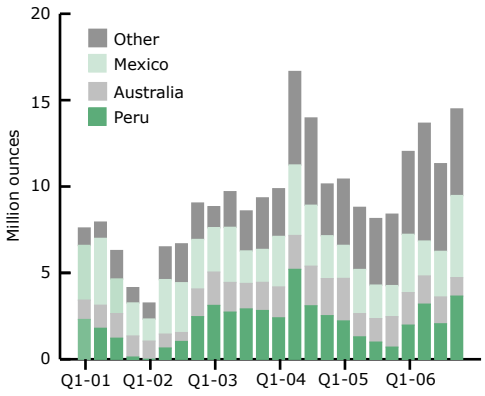
Japanese bullion imports increased sharply in 2006, rising to 53.8 Moz (1,673 t) from just 36.7 Moz (1,141 t) in 2005. The primary reason for this rise was not, as might have been expected based on past patterns, a drop in recovery from imported concentrates (which were effectively unchanged year-on-year), but rather the strength of fabrication demand (including photography; see Chapter 7 for more on this).

Korean Lead and Zinc Concentrate Imports



Source: WBMS

Japanese Bullion Imports



Source: GFMS

7. Fabrication Demand

- ***Global fabrication fell by a little under 1% in 2006, to 840.5 Moz (26,142 t), in spite of a trend towards significantly higher and more volatile silver prices.***

- ***Industrial fabrication, which rose by 6% or 24.2 Moz (753 t), was the only category to achieve year-on-year growth, in the process taking its share of total fabrication for the first time above 50%.***

- ***Much of the growth within the industrial market was attributable to a 7% rise in electrical and electronics fabrication.***

- ***The close to 5% reduction in jewelry was largely the product of price-related losses in India. Overall, the category posted a seven-year low.***

- ***For the second year in succession, photography recorded a double-digit fall, chiefly the result of notably weaker consumer film production.***

- ***Lower fabrication in price-sensitive countries and structural taste shifts in western markets largely accounted for the 7.5 Moz (233 t), or 11%, fall in silverware demand.***

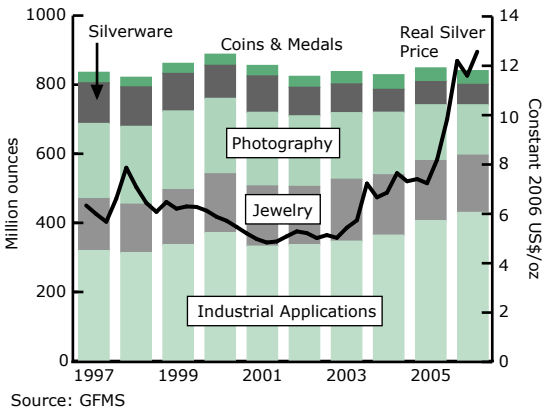
- ***Coin minting edged lower in 2006, as higher North American fabrication was offset by weaker output in Europe.***

At first sight, the flat performance in total fabrication last year may appear uneventful but, seen in the context of the 58% rise in average silver prices, this outcome was nothing short of remarkable. Much of the resilience was due to growth in industrial demand, led by rising electrical and electronics fabrication, which resulted in this category accounting for more than half of global fabrication, for the first time in GFMS' series. In fact, industrial fabrication was the only area to consume more silver in 2006.

In photography, a digitally-driven slide in consumer demand was the prime driver behind another major fall in the industry's silver offtake. The other principal areas of jewelry and silverware fabrication have, for the first time, been disaggregated in our statistics. Last year, high and volatile prices affected both categories, although the weakness in the price-sensitive jewelry markets, such as India, was cushioned by consumption growth in Europe and North America. Silverware's 11% fall in 2006 meant that the sector remained a victim of the continued secular shift away from sterling flatware products. In this regard, it is sobering to see that, over the past decade, silverware fabrication has nearly halved.

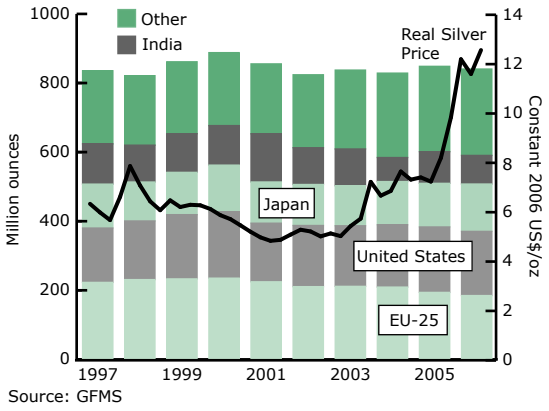
The fact that total fabrication was some five million ounces higher than ten years ago, in spite of a near 72 Moz (2,226 t) drop in photography, is testament to the strength of the industrial sector (despite the technology-related post bubble slump) and the continued popularity of silver jewelry, particularly in western markets.

World Silver Fabrication (by category)



Source: GFMS

World Silver Fabrication (by region)



Source: GFMS

Industrial Applications

• Global industrial fabrication grew by 6% last year to a record 430.0 Moz (13,375 t) thanks to still strong world GDP growth, with just over half the gains occurring in the electronics/electrical sector.

• East Asia, and in particular Japan, dominated the overall rise in industrial fabrication, although notable gains were also recorded in the United States and then the European Union.

Europe

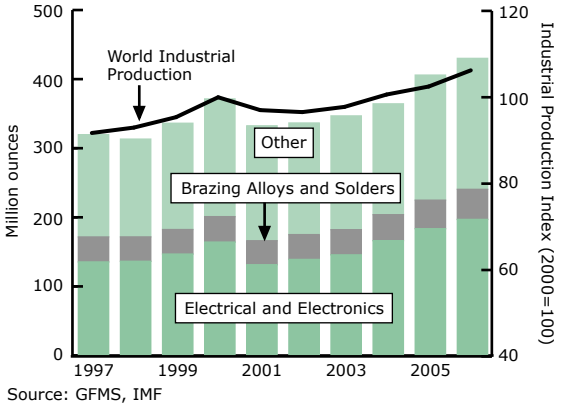
Industrial demand in Europe rose by 5% to a six-year high of 70.2 Moz (2,184 t). While in isolation a good result, it was a little below growth in other industrial regions, most obviously East Asia. They key driver of this is the relocation of end users to lower cost countries, often China. In certain circumstances (for example if the product is technically complex), supply from Europe is maintained but for basic pieces and, over time, other items, fabrication tends to follow end users to their new homes. These are often new operations started by European firms and so fabrication by these companies would follow a growth curve similar to the world total.

The impact on individual countries continues to vary a little. On the one hand, the typical pattern for the larger UK and French companies is to move some distance with relatively little fuss. On the other, the small and medium sized, often family owned, firms more predominant in Italy and Germany have either shown more reluctance to move or, if they have done so, it has often been to neighboring EU accession countries, which can still be easily supplied by the original fabricating plants.

It was of note that the rise in the price only had a marginal impact on overall industrial demand in Europe. (Industry respondents in fact noted that the hike in lease rates in advance of the launch of the silver exchange traded fund in April last year was more disruptive.) This was even the case where the cost of the silver was comparatively high in relationship to the manufacturing charge, illustrating the largely inelastic nature of industrial demand in the short to medium term. This was reflected in there being no step change in substitution or thrifting, largely as the adoption of a variant containing less or no silver for industrial applications only tends to occur when a whole product redesign takes place. However, last year's price and lease rate behavior does appear to have moved ongoing research into minimizing silver use higher up the agenda. Several companies also noted moves to trim work in progress, which can easily account for over half of annual fabrication.

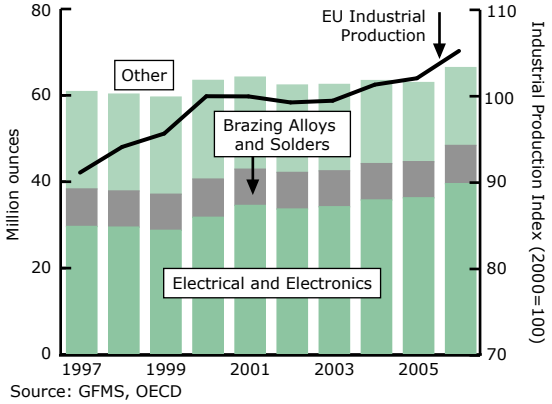
German industrial demand grew by a healthy 7% to a record 25.5 Moz (794 t) in 2006, with electronics/electrical applications accounting for almost 90% of the rise. Strength for the latter was due to buoyancy in key areas of use such as electricity transmission equipment or domestic trip switches and in many more minor sectors such as vacuum brazing or electronic packaging materials. Growth was noted in domestic market sales, reflecting the upturn in the country's economic growth and occurring despite the ongoing relocation of end users to lower labor cost countries. The latter was not as damaging as might be supposed as several consumers only moved to central/eastern Europe and so maintained supply from Germany. This and higher sales elsewhere contributed to growth in total exports of silver containing semi-manufactured items for electronics/electrical uses.

Components of Industrial Applications



Source: GFMS, IMF

EU Industrial Fabrication



Source: GFMS, OECD

Silver offtake for brazing alloys and solders rose at a rate not dissimilar to Germany's total industrial demand. This growth was thanks to both higher exports and domestic sales and occurred despite the ongoing shift by end users to processes not requiring these alloys or solders.

Industrial offtake in **Italy** last year was essentially flat at 10.8 Moz (337 t). This apparent stability, however, hides marked differences in the category's components. Brazing alloys and solders, for example, enjoyed a strong year. Silver pastes for photo voltaic cells also saw healthy results while contacts saw modest growth but pastes for the automotive industry were broadly flat; all of which explains the rise of just 3% for total electronics/electrical fabrication to 3.6 Moz (112 t). In sharp contrast, the demand for silver on the decorative side fell notably, due to such factors as lower use of silver in karat gold jewelry fabrication (which slumped by 21% in 2006).

French industrial fabrication was also scarcely changed year-on-year, reaching 10.3 Moz (321 t) in 2006. The country missed out on the typical pattern of growth due to relocation to low labor cost countries and signs of imports of silver bearing semi-manufactured items taking market share. A decline in fabrication, however, was avoided thanks to general strength in the electronics area and in particular power transmission equipment.

In recent years, a raft of offshore relocations has affected **UK** industrial demand across a number of silver consuming areas. In some cases, this has simply led to a focus on exports at the expense of supplies into the domestic market. Last year, as well as this shift overseas, higher electronics demand, particularly for silver salts in export markets, resulted in a notable rise in the country's electrical and electronics fabrication. There was, however, little change in brazing alloy fabrication but, as was the case in other key manufacturing markets, there was little evidence of a shift to lower silver bearing alloys, principally because of technical factors which have constrained the thrifting of silver in this application.

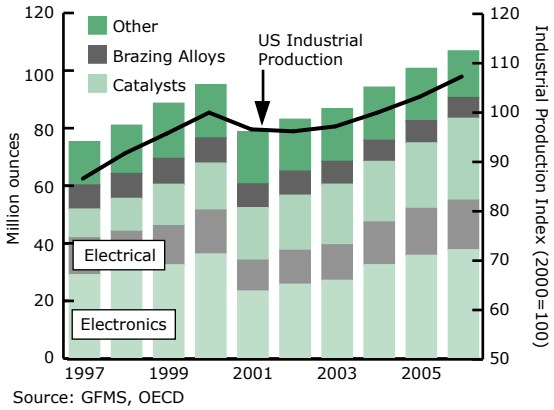
EU-15 Industrial Production

(Index, 2000 = 100)

2002	2003	2004	2005	2006
99.1	99.3	101.4	102.1	105.2

Source: OECD

US Industrial Fabrication



Source: GFMS, OECD

North America

In 2001, the bursting of the technology bubble resulted in a sharp drop in the country's electronics sector, which in turn led to a pronounced decline in the use of silver in this field. Five years on and an uninterrupted period of recovery and then growth, in the electrical and electronics sector in particular, culminated in last year's silver fabrication, in this field, exceeding the previous peak established in 2000. In fact, with the exception of brazing alloys and solders, every major area of silver industrial fabrication in the United States achieved year-on-year growth, resulting not only in a 6% growth in the use of silver but, for the industrial category as a whole, 2006 represented a record for the United States.

The largest segment of industrial demand, namely electrical and electronics fabrication, benefited from higher sales into a number of markets, including consumer electronics, the auto sector and the photo voltaic industry. Taking each in turn, one area of continued growth in consumer products was in plasma display panels. This technology first came to the fore (in terms of significant silver consumption, in spite of a high rate of process scrap) just two years ago and in 2006 there was little to suggest a slower pace of demand, compared with the rate of growth the previous year. Higher sales of cell phones and personal computers last year contributed to a further rise in the use of silver in shielding applications. As an aside, this is one area that could be vulnerable should silver prices remain at elevated levels. Although silver is unlikely to be replaced, technological changes in terms of a shift from the use of a silver spray paint to vapor disposition (i.e. sputtering), could potentially see significantly lower quantities of the metal being used in this area.

Table 4 - World Silver Fabrication (including the use of scrap - million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Italy	56.5	56.3	62.3	65.8	59.3	56.6	54.9	54.3	49.6	45.4
Germany	47.4	47.9	41.8	40.4	39.8	35.4	39.1	40.4	40.5	40.9
UK & Ireland	34.2	36.0	36.9	39.1	42.4	39.9	40.5	48.5	42.8	36.0
Belgium	27.2	33.8	37.5	35.3	32.1	30.8	29.3	27.6	26.2	28.7
France	28.7	28.7	26.9	29.2	29.2	27.7	26.3	13.0	12.5	12.7
Spain	8.7	8.8	7.5	6.7	5.5	5.2	4.8	6.3	5.6	5.0
Poland	3.4	3.6	3.7	3.9	3.4	3.2	3.8	4.3	4.7	4.8
Switzerland	9.6	10.7	11.1	9.0	3.5	3.4	3.0	3.1	3.3	3.1
Greece	4.5	4.1	4.1	3.3	3.0	2.8	2.9	2.9	2.9	2.8
Netherlands	2.4	2.2	2.8	1.9	1.8	2.1	1.9	2.5	2.2	2.0
Norway	1.5	1.5	3.0	2.9	2.3	1.9	1.9	2.1	1.8	1.7
Portugal	2.9	3.1	3.2	3.5	2.6	1.7	2.7	4.1	1.7	1.5
Austria	1.3	1.4	1.2	1.1	1.1	1.2	1.2	1.3	1.3	1.2
Sweden	1.7	1.4	1.4	1.3	1.0	1.0	1.2	1.2	1.2	1.2
Denmark	1.1	1.0	1.0	1.0	0.9	0.8	0.7	0.7	0.7	0.7
Czech & Slovak Republics	0.8	0.9	0.8	0.8	1.0	0.7	0.7	0.7	0.6	0.7
Finland	0.9	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.4
Romania	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Hungary	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Cyprus & Malta	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3
Yugoslavia (former)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Other Countries	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2
Total Europe	**234.3**	**243.5**	**247.5**	**247.4**	**230.8**	**216.3**	**216.8**	**214.9**	**199.5**	**190.1**
North America										
United States	157.3	169.7	185.9	192.2	169.6	177.0	175.3	180.3	189.4	185.8
Mexico	23.5	21.9	21.7	17.3	17.1	18.1	20.2	21.9	22.3	18.8
Canada	3.2	3.8	3.9	3.3	2.9	3.1	2.5	3.5	4.0	5.9
Total North America	**184.0**	**195.4**	**211.5**	**212.8**	**189.5**	**198.2**	**198.1**	**205.8**	**215.7**	**210.5**
Latin America										
Brazil	8.4	8.1	7.7	6.8	6.6	6.4	6.6	7.3	7.5	4.5
Argentina	3.8	3.5	3.0	2.3	1.8	1.9	2.4	2.5	2.6	1.9
Peru	1.1	1.1	1.0	1.0	1.0	1.0	0.7	0.7	0.6	0.7
Colombia	1.1	1.1	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7
Chile	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Ecuador	0.7	0.7	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.4
Other Countries	1.3	1.6	1.8	1.1	0.9	0.7	0.9	1.1	1.2	1.3
Total Latin America	**16.8**	**16.5**	**15.3**	**12.9**	**11.8**	**11.6**	**12.1**	**13.1**	**13.3**	**10.0**
Middle East										
Turkey	6.9	6.6	6.0	7.4	6.4	8.2	9.5	10.5	10.1	8.6
Israel	3.2	3.1	3.1	2.9	2.7	2.7	2.6	2.7	2.7	2.7
Egypt	2.1	1.9	2.0	2.0	1.8	1.6	1.8	2.0	1.8	1.7
Iran	1.6	1.3	1.4	1.4	1.5	1.4	1.5	1.5	1.6	1.6
Other Countries	1.7	1.7	1.8	1.9	1.8	1.8	1.8	1.9	2.0	2.0
Total Middle East	**15.6**	**14.6**	**14.3**	**15.7**	**14.2**	**15.6**	**17.2**	**18.5**	**18.2**	**16.5**
Indian Sub-Continent										
India	116.5	106.7	111.9	114.5	139.5	106.4	106.4	69.5	91.6	82.8
Bangladesh & Nepal	6.4	5.1	5.7	6.0	5.9	4.8	4.5	4.2	3.7	3.1
Other Countries	3.5	2.8	3.4	3.2	2.2	2.1	2.1	2.3	2.4	2.4
Total Indian Sub-Cont.	**126.4**	**114.6**	**121.0**	**123.6**	**147.6**	**113.3**	**113.1**	**76.1**	**97.7**	**88.3**

Table 4 - World Silver Fabrication (including the use of scrap - million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
East Asia										
Japan	127.2	112.8	122.5	135.0	119.3	118.7	115.9	125.2	126.3	137.1
China	32.8	34.1	33.7	36.1	39.8	47.6	52.8	59.0	61.6	67.6
Thailand	28.2	28.2	30.9	30.9	32.9	32.6	36.6	37.0	37.0	37.0
South Korea	18.6	13.8	16.7	19.6	17.1	17.8	19.2	19.8	20.2	20.9
Taiwan	6.9	6.8	6.7	9.4	8.5	9.0	10.3	11.3	11.7	12.8
Indonesia	4.1	3.1	3.6	4.2	5.2	4.5	4.7	5.8	5.1	5.7
Hong Kong	4.4	3.6	3.9	4.4	3.2	3.4	3.2	3.4	3.5	3.8
Vietnam	0.7	0.6	0.7	0.7	0.7	0.8	0.9	1.0	1.0	1.1
Myanmar, Laos & Cambodia	1.0	0.8	0.9	0.8	0.9	1.0	1.0	0.9	0.9	0.8
Malaysia	0.4	0.4	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7
Other Countries	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5
Total East Asia	**224.6**	**204.4**	**220.6**	**242.3**	**228.6**	**236.4**	**245.6**	**264.5**	**268.5**	**287.9**
Africa										
Morocco	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Tunisia	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3
South Africa	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3
Algeria	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Libya	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Countries	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total Africa	**1.8**	**1.7**	**1.7**	**1.8**	**1.7**	**1.7**	**1.7**	**1.8**	**1.8**	**1.8**
Oceania										
Australia	5.2	5.6	5.8	7.0	5.9	5.8	6.2	5.7	3.9	4.3
Total Oceania	**5.2**	**5.7**	**5.8**	**7.0**	**6.0**	**5.8**	**6.3**	**5.8**	**3.9**	**4.3**
CIS										
CIS	26.9	24.7	23.8	24.4	25.2	24.9	26.7	28.1	29.7	31.0
Total CIS	**26.9**	**24.7**	**23.8**	**24.4**	**25.2**	**24.9**	**26.7**	**28.1**	**29.7**	**31.0**
World Total	**835.6**	**821.2**	**861.5**	**888.0**	**855.4**	**823.9**	**837.4**	**828.6**	**848.3**	**840.5**

Turning to the auto sector, growth in the use of a variety of silver containing circuitry outweighed a reduction in car sales. One area of silver demand to benefit from this was the multi-layer ceramic capacitor (MLCC). That said, in recent years much of the growth in total MLCC demand has benefited base, rather than precious, metal compositions. However in 2006, within the United States at least, there was little sign of a further shift away from lower cost air furnaces (used in the manufacture of silver: palladium capacitors) in favor of nitrogen furnaces (which relate to the production of base metal MLCCs). This hiatus tell us that the precious metals segment of this industry is now largely made up of small and medium sized companies which generally lack the financial muscle to make the capital outlay required to move to base metal capacitors. In addition, last year saw little move to further replace palladium with silver and, in general, compositions appeared to stabilize in the region of 75% to 80% silver (and therefore 25% to 20% palladium).

One area of silver demand to achieve notably higher growth was in the production of photo voltaic cells, both domestically and in key export markets. Estimates of global photo voltaic power production suggest total output of 2.4GW in 2006 (source: Photon Consulting) compared with 1.7GW in 2005 (and just 1.2GW in 2004), the majority of which required silver. While this has been an area of tremendous growth, the use of silver has in fact been constrained by a shortage of silicon supplies, although there is evidence to suggest that new production will be brought online in the near future.

United States Industrial Production

(Index, 2000=100)

2002	2003	2004	2005	2006
96.2	97.2	100.0	103.2	107.3

Source: OECD

Table 5 - Silver Fabrication: Industrial Applications (including the use of scrap - million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Germany	17.8	18.4	18.3	20.8	21.4	21.2	21.7	23.5	23.9	25.5
UK & Ireland	11.2	13.0	12.2	13.5	11.5	11.3	12.0	12.5	12.4	14.2
Italy	11.4	10.6	10.6	10.9	10.4	10.4	10.2	11.5	10.8	10.8
France	13.4	11.2	11.6	12.3	15.9	14.6	13.8	10.3	10.2	10.3
Switzerland	8.6	10.0	10.4	8.3	2.7	2.7	2.3	2.4	2.6	2.5
Spain	2.9	3.1	2.7	2.0	1.3	1.3	1.2	2.1	1.9	1.9
Netherlands	1.7	1.7	1.7	1.7	1.5	1.5	1.5	1.6	1.6	1.6
Poland	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Austria	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Norway	0.4	0.4	1.4	1.2	0.7	0.6	0.6	0.8	0.7	0.6
Sweden	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3
Czech & Slovak Republics	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Belgium	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other Countries	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Total Europe	**70.6**	**71.4**	**72.1**	**73.7**	**68.4**	**66.4**	**66.1**	**67.4**	**67.0**	**70.2**
North America										
United States	75.3	81.0	88.6	95.1	78.7	83.1	86.8	94.2	100.8	106.8
Mexico	2.7	3.0	3.3	3.4	3.0	3.0	3.1	3.0	3.2	3.1
Canada	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	1.0	1.9
Total North America	**78.7**	**84.5**	**92.5**	**99.1**	**82.3**	**86.6**	**90.4**	**97.8**	**105.0**	**111.8**
Latin America										
Brazil	3.4	3.5	3.2	3.2	3.2	3.2	3.0	3.7	4.5	2.8
Argentina	1.2	1.2	1.0	0.8	0.6	0.6	0.6	0.6	0.9	1.0
Colombia	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Ecuador	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Countries	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total Latin America	**5.3**	**5.4**	**4.8**	**4.6**	**4.5**	**4.5**	**4.3**	**5.0**	**6.0**	**4.4**
Middle East										
Turkey	1.4	1.3	1.2	1.4	1.1	1.2	1.5	1.6	1.7	1.8
Israel	1.0	1.0	0.9	1.0	0.8	0.8	0.8	0.8	0.8	0.8
Egypt	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Countries	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Middle East	**2.6**	**2.5**	**2.4**	**2.6**	**2.2**	**2.3**	**2.5**	**2.6**	**2.7**	**2.9**
Indian Sub-Continent										
India	36.0	31.9	37.9	46.1	50.8	44.4	44.4	33.9	53.7	54.2
Pakistan	0.7	0.5	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.3
Total Indian Sub-Cont.	**36.7**	**32.4**	**38.5**	**46.7**	**51.1**	**44.7**	**44.7**	**34.1**	**54.0**	**54.6**
East Asia										
Japan	59.4	52.8	60.8	72.1	55.4	59.1	60.3	73.7	84.5	93.0
China	20.3	20.7	20.9	21.9	22.3	25.6	27.6	30.1	31.8	35.1
South Korea	12.3	11.2	12.2	14.8	12.4	13.4	14.5	15.2	15.5	16.2
Taiwan	6.3	6.2	6.3	8.8	8.0	8.7	9.9	10.9	11.3	12.3
Hong Kong	3.4	3.0	3.3	3.9	2.7	3.0	2.9	3.1	3.2	3.4
Indonesia	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Total East Asia	**102.3**	**94.5**	**103.9**	**122.0**	**101.4**	**110.2**	**115.8**	**133.5**	**146.9**	**160.6**

Table 5 - Silver Fabrication: Industrial Applications (including the use of scrap - million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Africa										
Morocco	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3
South Africa	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Other Countries	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total Africa	**0.6**	**0.6**	**0.6**	**0.6**	**0.5**	**0.5**	**0.5**	**0.6**	**0.6**	**0.6**
Oceania										
Australia	2.1	2.3	2.4	2.5	2.1	2.1	2.2	2.2	2.0	2.1
Total Oceania	**2.1**	**2.3**	**2.4**	**2.5**	**2.1**	**2.1**	**2.2**	**2.2**	**2.0**	**2.1**
CIS										
CIS	20.6	19.6	18.8	19.6	20.1	19.3	20.3	20.9	21.6	22.9
Total CIS	**20.6**	**19.6**	**18.8**	**19.6**	**20.1**	**19.3**	**20.3**	**20.9**	**21.6**	**22.9**
World Total	**319.5**	**313.2**	**336.1**	**371.3**	**332.4**	**336.5**	**346.8**	**364.2**	**405.8**	**430.0**

Another important area of industrial demand comes from the worldwide use of silver in ethylene oxide (EO) catalysts. In recent years, a number of small EO plants have shut down but these have generally been replaced by larger installments, which, in some cases, have each consumed in the region of 2.2 Moz (68 t) of silver (compared with average consumption per EO of 400-600,000 ounces in the late 1990s).

The one area of industrial demand to report notably lower fabrication in 2006 was in the brazing alloys and solders sector. In recent years, silver fabrication has oscillated in a narrow band but it would be misleading to conclude that last year's performance reflected a sharp fall in domestic consumption. Instead, last year's drop of some 7%, was attributable more to increased import competition rather than a decline in US consumption of brazing products (which account for the majority of silver demand in this segment), which is estimated to have remained broadly stable compared with 2005.

Turning briefly to this year, an apparent slowdown towards the end of 2006 looks to have continued into 2007. In addition, high silver prices could have a dual impact on the market. The potential fall out in terms of technical developments have already been alluded to above. High silver prices have also, and will continue to, impact on a company's ability to finance its work in progress. One possible repercussion might be a focus on faster metal throughput as well as, where possible, greater attention to just-in-time manufacturing.

India

GFMS estimate that industrial offtake was marginally up year-on-year at 54.2 Moz (1,687 t) in 2006. This apparently muted performance should not, however, disguise the fact that this was the second straight year in which industrial demand outstripped the combined use of the metal in jewelry, silverware and bars and coins combined (over five years, its market share has risen from just over 35% to close to 60%). Moreover, it was the highest ever level of demand from the industrial category recorded since GFMS began collating data on the Indian market.

This outcome is the result of two inter-related forces at work. One is the secular decline in jewelry and silverware (discussed in greater detail later in this chapter). The other is India's economic growth over the past five years, which is becoming more manufacturing (and services) based rather than agricultural (the latter now accounts for just 20% of GDP compared with 35% a few years ago). Much of this industrial growth has been seen in sectors that use silver in one form or another and, as a result, offtake, which is price inelastic in the short term, has sustained itself even in the wake of a 61% rise in the average silver price (by contrast both jewelry and silverware fell sharply).

In 2006, almost all categories of industrial demand showed a modest rise except jari (discussed later) and pharmacy and chemicals, where offtake fell by 10% to 5.8 Moz (180 t). The decline in the latter can

Indian Vehicle Production

('000s)

2002	2003	2004	2005	2006
824	1,022	1,309	1,421	1,687

Source: Global Insight

be attributed to the rise in both gold and silver prices (they are often used in combination) and the continued controversy over the presence of heavy (read toxic) metals in ayurvedic medicines.

The 'real' industrial categories of electrical/electronics and brazing alloys/solders both recorded modest rises in 2006, following impressive growth year-on-year in 2005. According to the Centre for Monitoring the Indian Economy (CMIE), the IIP (index of industrial production) recorded impressive growth of over 9.5% last year, and manufacturing grew even more strongly. One of the reasons for the relatively muted growth in offtake in 2006 was the fall in the production of certain consumer durables like air conditioners (which recorded a 10% decline in production last year). This was offset by robust growth in other areas such as auto production, up by 19% year-on-year according to Global Insight.

GFMS estimate that the use of silver in plating grew by a modest 4% during 2006, but this needs to be seen in the context of the massive 176% rise in the previous year. That offtake was not only sustained at these levels, but grew, is a reflection of the strength of the costume jewelry segment. Although electronic and electrical end uses helped to boost this sector's demand, the most important use of the metal has been in costume jewelry. In 2006, growth in this sector picked up as both gold and silver prices rose sharply, and there has been an explosion in the number of costume jewelry outlets in and around the country (even in the Zaveri Bazaar in Mumbai, the home of traditional gold and silver jewelry).

The fabrication of silver in decorative applications showed a modest rise. One of the main areas of use is jari (a decorative thread made of gold or silver), although here we estimate that offtake actually fell by 2.5% (the prime reason for the fall was the high price of silver that prompted the use of plastic or artificial jari). By contrast,

Global Billings

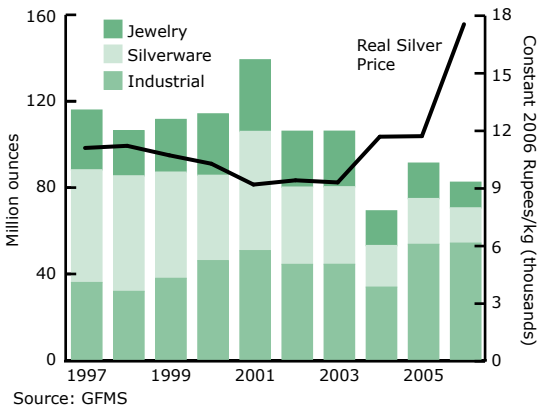
(semi-conductor shipments per year, millions)

	World	Americas	Europe	Japan	Asia
2005	227.5	40.7	39.3	44.1	103.4
2006	247.7	44.9	39.9	46.4	116.5
Change	20.2	4.2	0.6	2.3	13.1
Change %	9%	10%	2%	5%	13%

Source: SIA

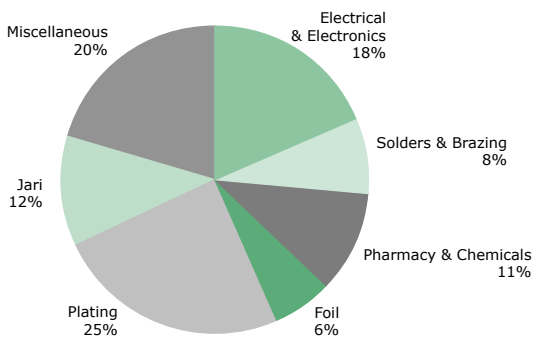
the use of silver in foils showed a surprising rise of 6% to 3.4 Moz (106 t) during 2006, a function primarily of the virtual failure of the government in imposing its ban on tobacco-based gutka manufacture (which has led to a surge in demand for silver foils, a vital component of gutka). Furthermore, the use of silver as a thin layer on sweets received a boost from the booming food processing industry.

Indian Fabrication



Source: GFMS

Indian Industrial Fabrication, 2006



Source: GFMS

Japanese Industrial Production

(Index, 2000=100)

2002	2003	2004	2005	2006
92.6	95.4	100.5	101.7	106.3

Source: OECD

Japanese Non-Photographic Nitrate & Contact Production

Million ounces

	2003	2004	2005	2006
non-photo nitrates	15.3	20.0	23.3	26.6
contacts	8.5	10.5	11.4	11.9

Source: GFMS

East Asia

GFMS estimate that **Japanese** industrial uses of silver continued to grow strongly in 2006, rising for the fifth straight year to hit 93.0 Moz (2,893 t), equivalent to a 10% lift year-on-year. This leaves the industrial category of demand around 29% higher than the level seen during the peak of the technology bubble in 2000.

As we noted in last year's *World Silver Survey*, the overriding driver of higher demand in recent years has been the proliferation of digital products that permeate virtually every aspect of our day-to-day lives. A common refrain from our contacts in Japan (and indeed elsewhere) is that the combination of silver's technical properties and price competitiveness has only served to consolidate its use in a range of applications. Having said this, it should be remembered that in spite of its low price (for example, compared with palladium), industrial users are still trying to engineer it out of products as much as possible (or to look at base metal alternatives). In this context, one of the larger silver users in Japan, whom GFMS have been interviewing for over two decades, actually reported their silver consumption flat in 2006, the result of both thrifting and miniaturization (which they reported has had more of an effect on silver than on palladium).

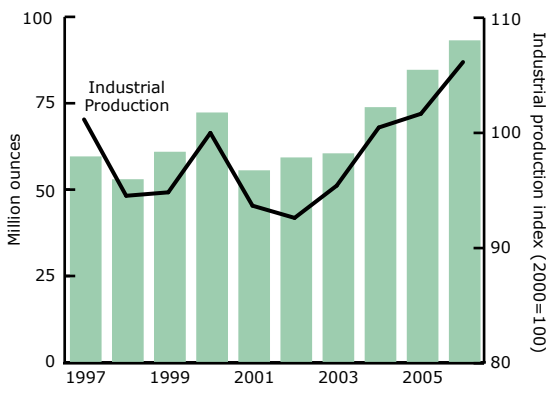
The pressure to thrift, needless to say, only grew over the past year due to the high silver price. Our contacts in Japan have, in the main, indicated that at prices around $10, the pressures to thrift have been modest. However, current prices have been exercising the minds of many industrial users of the metal and, during 2006, our information is that some significant thrifting gains were made in certain applications (although at times it is unclear as to which has been the more powerful driver of constrained silver use, thrifting or miniaturization). The high silver price has also focused attention on silver stocks, and our supply and demand balance for Japan in 2006 suggests that there was modest de-stocking over the course of the year.

Turning to the actual uses of silver, 2006 saw both the growth in new applications and the consolidation of consumption in established applications. In the case of the former, plasma display panels (PDPs) and photo voltaic production have continued to grow sharply, although it should be noted that the net volumes of silver used in both of these areas are, in the broader scheme of the silver market, relatively small (PDPs use large gross quantities of silver, but relatively small amounts are left on the screen with the balance being recovered as process scrap). It has been suggested to us that the phenomenal growth in the PDP market may well be coming to an end, with a forecast peak coming in 2008 or 2009.

In the case of photo voltaic cells, this is still a relatively new market place and expectations in the Japanese market are for continued strong growth into the future, primarily on the back of carbon dioxide emissions concerns. Further relatively new areas of growth have been seen in the diversification of silver nitrate usage into non-photo applications such as printing and photo etching for electronics and display applications.

As far as "old" technology applications of silver are concerned, GFMS data for Japan suggests that demand

Japanese Industrial Fabrication



Source: GFMS, OECD

has been fairly stable in the case of MLCCs and that contact production actually rose in 2006, in spite of the competitive pressures at the more "commoditized" end of the spectrum from countries like Korea and China. The rise in automobile production (up by close to 5%) contributed modestly to the increase in contact demand last year, while a myriad of other products, including electrical machinery and switching devices, recorded strong growth in 2006 and concomitant demand for contacts. Indeed, if it were not for strong growth in areas of engineering such as specialized electrical machinery, where Japan is particularly strong, it seems probable that contact production last year would have stagnated. As far as anti-bacterial uses of silver are concerned, volumes rose in 2006 and offtake in mirrors was flat year-on-year.

Chinese industrial uses of silver are estimated to have risen by 10.4% in 2006 to reach 35.1 Moz (1,093 t), a record for the country and a reflection of the phenomenal economic growth recorded in recent years. Indeed, the 10.9% increase in China's GDP last year has translated into rises in electronics, automobile and infrastructure construction industries.

China, like many other fabricating nations, has capitalized on the higher global demand for electronics and components used in manufacturing. The country has now surpassed Japan and the United States to become the largest producer of integrated circuits or microchips and has grown from a fledgling industry fifteen years ago to record a sales turnover of semi-conductors worth $75 billion last year. In addition, driven by exceptional growth in the global microchip market, last year China's output of integrated circuits grew by more then 36% year-on-year.

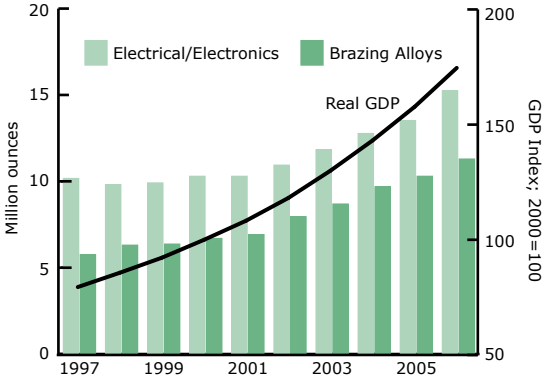
Turning to household appliances, China remained the world's largest manufacturer of color televisions sets producing over 50% of global output. Traditional cathode ray tube (CRT) sets still account for more than half of Chinese offtake in yuan terms, but sleek, fashionable flat-screen models continue to erode this market despite the stiffer price tag. Sales of flat screen models surged over 150% year-on-year to 4.8 million units last year, with this number expected to almost double again by the end of 2007. Furthermore, China produced over 3.9 million liquid crystal display (LCD) televisions in 2006 according to the Ministry of Information, with the total output for that period accounting for almost 10% of China's television production. Finally, strong competition in this market has drastically reduced the retail price point for these goods in the last twelve months, providing access to this technology to a wider audience, which in turn has further ignited demand.

Cell phones and personal computers also benefited from economic progress, with sales up 58% and 16% respectively in 2006 according to data from the National Bureau of Statistics. China has become one of the world's largest cell phone markets, with production last year surpassing 450 million units, of which 350 million were exported, with sales predicted to increase a further 25% in 2007.

The auto industry has remained the backbone of industrial output in China in recent years. In 2006, the production of passenger cars rose in China by a staggering 39.7% year-on-year reaching 7.3 million units according to statistics published by the Chinese Association of Automobile Manufacturers, moving China ahead of Germany to become the world's third largest car producer. With prices for vehicles expected to retreat further due to increased domestic and international competition, it is expected that this industry will continue to grow expeditiously.

Chinese brazing alloy and solder demand grew robustly last year, rising 10% to 11.3 Moz (351 t) in 2006. Strong gains in this sector were recorded despite the Chinese government taking measures to cool down the overheated real estate market, with sales of new dwellings significantly higher last year. Furthermore, the building of the infrastructure projects for the 2008 Beijing Olympic Games is well underway and is expected to

Chinese Industrial Uses of Silver



Source: GFMS, IMF

The Main Uses of Silver

Silver's unique properties include its strength, malleability and ductility, its electrical and thermal conductivity, its sensitivity to and high reflectance of light and, despite it being classed as a precious metal, its reactivity which is the basis for its use in catalysts and photography. This versatility means that there are few substitute metals in most applications, particularly in high-tech uses in which reliability, precision and safety are paramount.

Industrial

Silver is the best electrical and thermal conductor of all metals and is hence used in many electrical applications, particularly in conductors, switches, contacts and fuses. Contacts provide junctions between two conductors that can be separated and through which a current can flow, and account for the largest proportion of electrical demand. The most significant uses of silver in electronics are in the preparation of thick-film pastes, typically silver-palladium for use as silk-screened circuit paths, in multi-layer ceramic capacitors, in the manufacture of membrane switches, silvered film in electrically heated automobile windshields and in conductive adhesives. Silver used in the fabrication of photo voltaic cells is gaining momentum, while lower retail prices have led to a surge in televisions using plasma display panels (PDP), which has boosted silver demand for these electronic products. Silver inks are also now also being used in smart cards and radio frequency identification (RFID) tags. The ease of electro-deposition of silver from a double-alkali metal cyanide, such as potassium silver cyanide, or by using silver anodes accounts for its widespread use in coating. Silver solutions are made up of a cyanide, a carbonate, silver and a brightener. The silver is usually added as the single salt, silver cyanide, or the double salt, potassium silver cyanide. Various forms of silver are used as anodes and may be in the form of plates, bars, rods, grain or in custom-designed shapes. Silver is also used as a coating material for compact disks and digital versatile disks.

The unique optical reflectivity of silver, and its property of being virtually 100% reflective after polishing, allows it to be used both in mirrors and glass coatings, cellophane or metals. Many batteries, both rechargeable and non-rechargeable, are manufactured with silver alloys as the cathode. Although expensive, silver cells have superior power-to-weight characteristics than their competitors. The most common of these batteries is the small button shaped silver oxide cell (approximately 35% silver by weight) used in watches, cameras and similar electrical products. Silver, usually in the form of mesh screens but also as crystals, is used as a catalyst in numerous chemical reactions. For example, silver is used in formaldehyde catalysts for the manufacture of plastics and, to an even greater extent, in ethylene oxide catalysts for the petrochemical industry.

Silver is employed as a bactericide and algicide in an ever increasing number of applications, including water purification systems, surface treatments and disinfectants.

The joining of materials (called brazing if done at temperatures above 600º Celsius and soldering when below) is facilitated by silver's fluidity and strength. Silver brazing alloys are used widely in applications ranging from air-conditioning and refrigeration equipment to power distribution equipment in the electrical engineering sector. It is also used in the automobile and aerospace industries. Bearings electroplated with high purity silver have greater fatigue strength and load carrying capacity than any other type and are used in various high-tech and heavy-duty applications.

Photography

The photographic process is based on the presence of light-sensitive silver halide crystals, prepared by mixing a solution of soluble silver, usually silver nitrate, with a soluble alkali metal halide such as sodium chloride or potassium bromide. These grains are then suspended in the unexposed film. The effect of light on the silver halide disturbs the compound's structure, rendering it selectively reducible to metallic silver by reducing agents called developers. The resulting negative image is converted to the positive by repeating the process under specific conditions. Photographic film is used in radiography, the graphic arts and in consumer photography. Photographic film manufacturers demand very high purity silver.

Jewelry and Silverware

Silver possesses working qualities similar to gold, enjoys greater reflectivity and can achieve the most brilliant polish of any metal. Consequently, the silversmith's objective has always been to enhance the play of light on silver's already bright surface. Pure silver (999 fineness) does not tarnish easily but to make it durable for jewelry, it is often alloyed with small quantities of copper. It is also widely used with base metals in gold alloys. Sterling silver, at a fineness of 925, has been the standard of silverware since the 14th century, particularly in the manufacture of hollowware and flatware. Plated silverware usually has a coating of 20-30 microns, while jewelry plating is only 3-5 microns.

Coins

Historically, silver was more widely used in coinage than gold, being in greater supply and of less value, thus being practical for everyday payments. Most nations were on a silver standard until the late 19th century with silver coin forming the main circulating currency. But after the gold rushes, the silver standard increasingly gave way to gold. Silver was gradually phased out of regular coinage, although it is still used in some circulating coins and especially in American, Australian, Canadian and Mexican bullion coins for investors.

further boost demand for related materials such as steel, cement and solders.

Hong Kong's industrial uses of silver increased by over 7% to 3.4 Moz (107 t) last year as much of the manufacturing sector benefited from the rapid growth of the Chinese economy. In 2006, Hong Kong remained the largest world exporter of sound recording apparatus and the second largest exporter of radios and video recording products (including digital versatile disk (DVD)/video compact disk (VCD) recorders/players), with exports of these products and other audio visual equipment rising by 7% in 2006 and with demand for parts and accessories increasing by 15%. The Chinese mainland was the largest export destination, constituting almost 50% of total exports in 2006 while exports of audio visual equipment to the United States increased by 8% thanks to robust demand for digital and home entertainment products.

A robust electronics sector helped lift **South Korea's** industrial offtake by 5% in 2006 to 16.2 Moz (503 t). This increase reflects the continued demand for mass produced, low cost electronic items, particularly those going into consumer industries, that have been the catalyst for the rise across electronic industries, for example, in Taiwan and Japan. Demand for silver based products such as contacts and plating chemicals, which constitute the bulk of silver use in electronics, was driven by the surge in end-user demand for items as wide ranging as hand held game consoles to satellite GPS units used in the automobile industry.

While some western markets are reaching saturation point for the consumption of electronic products, other emerging nations are only now beginning to access these more affordable product ranges. Furthermore, in many instances, electronic items have a limited shelf life, or more importantly, a short "fashion" life, with many consumers continuously upgrading their products as newer models become available. Elsewhere, the construction industry has shown initial signs of recovering after several years of negative growth while the general manufacturing sector still remains weak after the South Korean economy stalled in recent years.

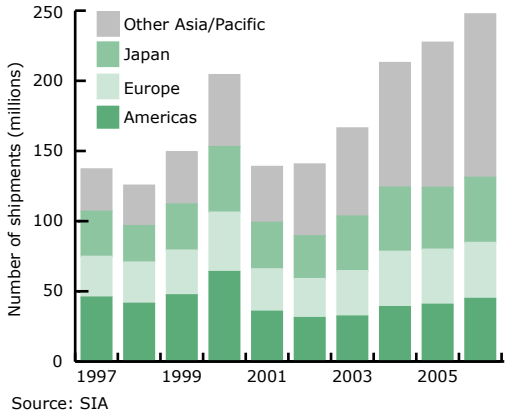
Korean Industrial Production

(Index, 2000=100)

2002	2003	2004	2005	2006
108.8	114.6	126.3	134.1	147.6

Source: OECD

Global Semi-conductor Billings



Source: SIA

The outlook for 2007 continues to be quite promising as cell phones, car navigation units and next-generation portable audio players are expected to drive demand. Industry observers are therefore anticipating a further period of prosperity for the market, while silver used in the construction sector is likely to rebound, with a resurgence in the building industry predicted.

Taiwanese industrial fabrication rose by almost 9% in 2006. Driven predominately by a robust electronics sector, silver industrial demand increased by 1.0 Moz (30 t) to reach 12.3 Moz (381 t) last year. Plating solutions, by far the largest industrial segment at over 65% of total industrial output, increased by 9% year-on-year led higher by the continued global demand for electronic consumer items and more specifically for the manufacture of LCDs. Taiwan has positioned itself as the world's number one producer of notebooks, LCD monitors, motherboards, PDAs, among other items and has, for more than a decade, proven itself as a global leader in this highly competitive manufacturing industry.

Looking ahead, we estimate that industrial demand for silver, though not falling significantly, should lose some of its current forward momentum in 2007 as higher silver prices will encourage companies to run down existing stocks and postpone new orders.

Table 5a - Silver Fabrication: Electrical and Electronics (including the use of scrap - million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
United States	41.9	44.1	47.1	51.5	34.1	37.6	39.5	47.4	52.1	55.0
Japan	25.8	23.7	30.0	36.7	26.6	29.4	30.2	38.0	43.7	48.6
Germany	11.9	12.2	12.2	14.3	15.7	15.6	16.2	17.7	18.3	19.7
China	10.2	9.8	9.9	10.3	10.3	10.9	11.8	12.8	13.5	15.2
Taiwan	4.7	4.8	4.8	7.0	6.5	7.2	8.4	9.2	9.6	10.4
India	4.2	4.2	4.5	4.8	4.7	4.9	5.1	5.4	9.6	10.0
South Korea	6.5	6.0	6.6	8.2	7.2	7.6	8.4	8.8	9.0	9.5
France	7.7	6.7	6.8	7.3	11.0	9.9	9.5	8.1	8.0	8.1
UK & Ireland	5.1	6.0	5.1	6.0	4.3	4.6	4.9	5.1	5.4	7.1
Italy	3.2	2.9	3.0	3.1	2.8	2.8	2.9	3.8	3.5	3.6
Hong Kong	2.7	2.5	2.9	3.5	2.5	2.8	2.7	3.0	3.0	3.3
Mexico	1.2	1.3	1.9	2.1	1.8	1.8	1.9	1.8	2.1	2.0
Turkey	1.0	0.9	0.8	0.9	0.7	0.8	1.0	1.1	1.1	1.2
Brazil	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.7	2.1	0.9
Australia	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7
Netherlands	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
Switzerland	5.5	7.3	7.5	5.3	0.4	0.4	0.5	0.5	0.4	0.4
Spain	0.9	1.0	1.0	0.3	0.0	0.0	0.0	0.3	0.3	0.3
Austria	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Romania	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Egypt	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
World Total	**135.4**	**136.4**	**146.8**	**164.2**	**131.4**	**139.1**	**145.7**	**166.2**	**183.6**	**197.0**

Table 5b - Silver Fabrication: Brazing Alloys and Solders (including the use of scrap - million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
China	5.8	6.3	6.4	6.7	6.9	7.9	8.7	9.7	10.3	11.3
United States	8.4	8.6	9.0	8.7	8.3	8.4	7.9	7.3	7.7	7.2
India	1.6	1.5	1.6	1.8	1.8	1.9	2.1	2.2	4.2	4.3
Japan	5.0	4.2	4.2	4.4	3.5	3.3	3.3	3.7	3.9	4.1
Germany	3.1	3.1	3.0	3.2	2.8	3.0	3.1	3.2	3.2	3.4
Italy	1.9	1.7	2.0	2.1	2.0	2.1	2.0	2.0	2.1	2.3
Canada	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.8	1.7
South Korea	1.1	0.8	0.8	1.0	1.2	1.4	1.4	1.4	1.5	1.5
Switzerland	1.7	1.6	1.5	1.6	1.3	1.3	1.4	1.4	1.5	1.4
UK & Ireland	1.1	1.1	1.0	1.1	1.2	1.1	1.2	1.3	1.3	1.4
Taiwan	1.1	1.0	1.0	1.2	0.9	1.0	1.1	1.1	1.1	1.2
Brazil	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8
France	1.4	1.0	0.9	1.1	1.0	1.0	0.8	0.7	0.8	0.8
Spain	0.9	1.0	1.1	1.1	1.0	1.0	0.9	0.8	0.6	0.6
Australia	0.6	0.7	0.7	0.8	0.6	0.6	0.6	0.6	0.5	0.5
Mexico	0.9	1.0	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
Netherlands	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Austria	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Israel	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
World Total	**36.1**	**35.3**	**35.5**	**36.8**	**34.7**	**35.9**	**36.4**	**37.6**	**41.2**	**43.5**

New Developments in Silver

In recent years, silver, along with most metals in the commodities complex, has enjoyed a resurgence of interest. The majority of activity has been driven by the investment sector as speculators have raced to take advantage of rising metal prices. However, it will be the industrial applications that will ensure the sector continues to grow in the future when metal prices retreat, and investors move away to other market opportunities. The main growth area in industrial silver in recent years has been in electronics, health and in renewable energy fields, all of which rely on the properties of the metal as a catalyst, biocide and for conducting and storing electricity.

Today more then ever, mankind is looking at ways to increase its use of renewable energy and reduce the burning of fossil fuels. It is the area of photo voltaic cell development that scientists believe has the potential to significantly increase the household and industrial use of renewable energy. Silver is becoming widely used in the manufacturing of photo voltaic cells, which are backed with silver to gather the current and transport it to electrical lines. This form of energy generation offers producers no air pollution or hazardous waste and, with pressure mounting on governments to reduce greenhouse emissions, it is seen as an area of explosive growth in the short to medium term.

The recent introduction to the consumer market of televisions using plasma display panels (PDP) has boosted silver demand in these electronic products. The large flat screens, once unaffordable to the masses, have reduced in price significantly due to global competition, and are now considered a mainstream consumer item. These flat panel displays consist of two parallel flat sheets of glass. On the back of the glass screen facing the viewer is a grid of thousands of lines of silver, each thinner than a human hair, which conduct the electronic signals that activate a gas that hits color phosphors and more lines of silver on the second sheet of glass. On impact, these color phosphors react by flashing color to create the picture seen by the viewer. Furthermore, with sales of PDPs expected to expand from 10 million last year to over 25 million by 2010, manufacturers' requirements for the precious metal will only increase.

The anti-bacterial properties of silver have been well documented over many years but the recent advances in biocide technology are now beginning to gain momentum and appear in mainstream society. Silver sulfadiazine has been widely used in the treatment of burns and is now estimated to be used in over 70% of burns units in the United States. Bandages that release silver ions on application have been used in the management of wounds by hospitals in recent years but this product is now widely accessible in supermarkets and pharmacies globally. In addition, the US military now issues its combatants with several dressing options that contain silver in an effort to reduce infection. One such product is "Silverlon" fabric which delivers silver ions into a burn with the convenience of a paper towel, providing full anti-bacterial protection to the injured soldier on his or her way to a field hospital.

In recent years, there have been many new and exciting developments in the use of silver as a means of fighting bacteria around the home and office, including the introduction of personal products containing silver as an anti-bacterial element. For example, a tooth brush head that releases silver ions to reduce bacteria in the mouth or clothing ranges that are impregnated with silver ions to prevent the growth of bacteria and odor. In the office, products using silver will also start to become common place with the introduction of paper containing a silver compound to guard against odors, germs, and the growth of fungus, mold and mildew. Another example of use in the office environment is the introduction of pens and a computer mouse that comes with an anti-bacterial nano-coating to protect the user from bacterial transfer.

Finally, the use of silver biocides for preserving timber products and preventing mildew and other forms of bacterial damage to building structures has increased significantly in recent years as manufacturers shift from solvent based to water based systems and through the replacement of traditional biocides by more expensive environmentally sound options. It is quite likely that silver will be able to capture part, if not all, of the estimated maximum worldwide market of 120-130 Moz (3,900-4,200 t) that is available for wood preservation.

Table 6 - Silver Fabrication: Photographic Use (including the use of scrap - million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
EU-25	73.4	77.2	77.0	72.5	71.6	66.9	65.0	61.6	54.7	48.7
Other Countries	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Total Europe	**73.5**	**77.4**	**77.2**	**72.6**	**71.7**	**67.1**	**65.2**	**61.8**	**54.8**	**48.8**
North America										
United States	62.9	69.0	73.5	70.2	65.5	64.8	58.9	55.2	56.4	46.4
Mexico	4.1	3.4	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total North America	**66.9**	**72.5**	**76.4**	**70.2**	**65.5**	**64.8**	**58.9**	**55.2**	**56.4**	**46.4**
Latin America										
Argentina	1.8	1.8	1.6	1.3	1.0	1.1	1.5	1.5	1.3	0.5
Brazil	3.4	3.2	3.2	2.4	2.3	2.1	2.2	2.2	1.4	0.0
Total Latin America	**5.2**	**5.0**	**4.8**	**3.7**	**3.3**	**3.2**	**3.7**	**3.7**	**2.7**	**0.5**
Indian Sub-Continent										
India	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Sri Lanka	0.3	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1
Total Indian Sub-Cont.	**1.0**	**0.7**	**0.7**	**0.7**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
East Asia										
Japan	58.6	58.2	59.9	61.2	62.2	57.8	53.9	49.6	39.7	42.1
China	6.0	6.1	3.7	3.9	4.5	5.7	5.8	6.1	5.4	5.0
Total East Asia	**64.6**	**64.3**	**63.6**	**65.0**	**66.7**	**63.5**	**59.7**	**55.7**	**45.1**	**47.1**
Oceania										
Australia	1.6	1.6	1.7	2.7	2.4	2.3	2.1	1.5	0.1	0.1
Total Oceania	**1.6**	**1.6**	**1.7**	**2.7**	**2.4**	**2.3**	**2.1**	**1.5**	**0.1**	**0.1**
CIS										
CIS	4.5	3.8	3.4	3.2	3.1	3.0	2.8	2.7	2.6	2.4
Total CIS	**4.5**	**3.8**	**3.4**	**3.2**	**3.1**	**3.0**	**2.8**	**2.7**	**2.6**	**2.4**
World Total	**217.4**	**225.4**	**227.9**	**218.3**	**213.1**	**204.3**	**192.9**	**181.0**	**162.1**	**145.8**

Photography

• ***The use of silver in photography fell by 10% in 2006, largely the result of weaker film production.***

Last year, global fabrication of photographic products fell to 145.8 Moz (4,535 t). Although another reduction in the annual total was entirely expected, 2006 marked the second successive year in which the industry has experienced a double-digit percentage decline.

Once again, much of the weakness was attributable to significantly weaker film production, within which the pace of decline quickened last year. Although film output was lower in every principal region, of note were the respective 28% and 24% (source: Photofinishing News) declines seen in Europe and the United States. The uptake of digital products in consumer markets first started to have a material impact on re-usable camera sales in 2001 (source: as above), since when sales have experienced double-digit percentage falls in nearly every year, with the drop in 2006 the most pronounced. It was a similar picture in the one-time-use sector with regards to the reduction in last year's sales but, in contrast to the re-usable segment, only in 2005 did sales first register a year-on-year fall. As well as the impact of digital technology in these areas, the use of silver in consumer photography was further hit by an economization in the use of silver in film loadings, the motivation for which has grown in the face of rising silver prices.

Given the above discussion, it is perhaps surprising that the global use of silver in photography did not fall by more than 10% last year. Part of the reason for this can be attributed to a broadly stable outcome in the paper market, along with broadly little change in the demand for medical products. The second of these two has come about in spite of a growing digitalization of hospitals, particularly in the United Kingdom and the United States, due to growing requirement for halide-based technologies

in emerging markets such as India and China. Lastly, it appears as though the use of silver in motion pictures remained broadly unchanged last year in spite of the introduction of digitally-based cinemas.

Fabrication demand in the **United States** dropped by nearly 18% to 46.4 Moz (1,442 t) in 2006. As has often been the case in previous years, the change in output was considerably influenced by corporate decisions regarding the production location of analog products, such as consumer film and paper. Last year, this resulted in different manufacturers either concentrating fabrication at their US facilities or moving production offshore. In addition, the volume of silver used by manufacturers was affected by the ongoing shift to digital technology. This particularly hit demand for consumer and professional film, although to a somewhat lesser extent the graphic arts and radiology markets were also noticeably impacted. In contrast, sales of motion picture film have by and large been maintained.

European photographic demand fell a further 11% in 2006 to a new record low of 48.8 Moz (1,519 t) (on the basis of GFMS series, starting in 1990). The drop was the result of continued losses in both consumer and medical uses. With regards to the former, digital camera sales in the region continued growing last year, while film sales declined dramatically. As for the radiology sector, digital medical solutions continued to penetrate European hospitals, with evidence of a rising number of facilities that have made a full switch. The decline in photographic demand affected the majority of European countries. The main exception came in Belgium, out of which exports of silver nitrate, both to countries within Europe and outside the region, were up markedly year-on-year.

Film & Paper Consumption & Photographic Fabrication

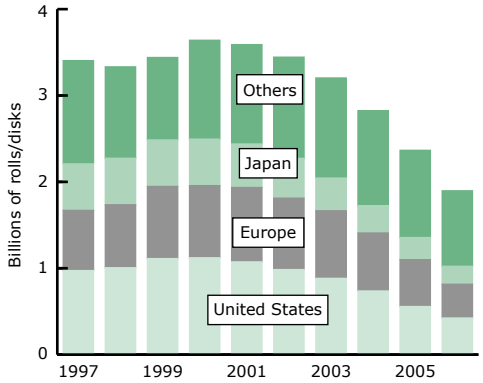
	2002	2003	2004	2005	2006
Film**	3,444	3,203	2,824	2,366	1,897
Paper^	1,795	1,750	1,663	1,551	1,532
Fabrication*	204	193	181	162	146

**Million of rolls, ^millions square meters, *Moz
Source: Photofinishing News Inc., GFMS

GFMS estimate that **Japanese** silver offtake in photographic applications actually rose in 2006, by around 6% to 42.1 Moz (1,308 t), from a revised 2005 figure of 39.7 Moz (1,234 t). At first sight, this may appear a remarkable turnaround considering the steep decline in demand, driven by the shift to digital technologies across all applications, seen since the peak of 2001 when according to GFMS estimates over 62 Moz (around 1,900 t) of silver was consumed.

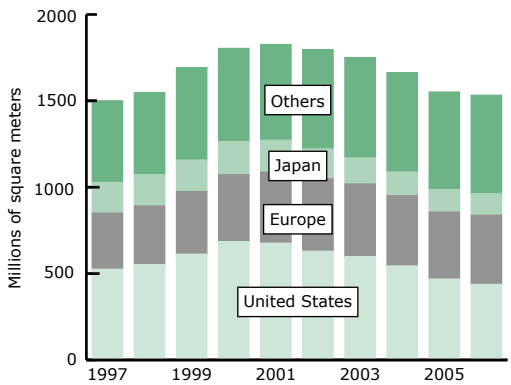
Not surprisingly, the rise in silver use in Japan last year did not signal a return to silver in the photographic industry in that country, and simply reflected the repatriation of production from other centers (the United States in particular). Somewhat ironically, 2006 saw the reversal of the trend seen in the 1990s when off-shoring of production from Japan to the United States and Europe was very much in vogue. However, while the driving forces at that time were rising demand across the globe for silver containing photographic products and cost and tax issues, last year's repatriation was directly tied to declining global demand for such products, coupled to the impending closure of one large fabricator's facilities (which has impacted film production for the amateur market, but not, according to our sources, paper and medical film production).

World Consumer Film Sales



Source: Photofinishing News Inc.

World Color Photographic Paper Consumption



Source: Photofinishing News Inc.

Digital Technology and the Photographic Market

For the seventh consecutive year, silver fabrication demand in 2006 for photographic uses continued to decline. Since its peak in 1999, demand has contracted by a cumulative 82.1 Moz (2,552 t). In tune with the trend seen throughout this decade so far, last year's fall was in large measure the result of the continued penetration of digital technology of the consumer and professional photography markets.

In the consumer and professional photography segments, the main impact the success of digital technology has had on the market has come in the form of a dramatic decline in silver halide demand. In contrast, the impact of digital technology on sales of photographic paper has been far less pronounced.

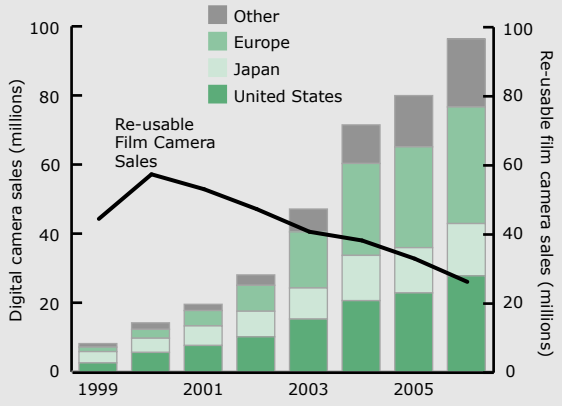
During the early stages of the explosion of digital photography, many market participants had argued that the higher volume of pictures taken (due to their nearly zero marginal cost) would result in a rising number of pictures being printed and therefore in fact led to an increase in demand for photographic paper. Although these dynamics have provided some support to the market, as indicated by the far less dramatic decline in photographic paper fabrication, the growth scenario has not yet materialized. Consumers have instead tended to either only keep electronic copies of their pictures and view them on screen or print them at home, using low cost inkjet printers.

Moving to medical applications, this market has proved far more resilient. Although in developed countries a significant portion of hospitals have already switched to digital (for instance, around 80% of UK hospitals), the decline in demand this has led to has been largely offset by growing consumption of conventional technology film in developing countries.

Silver demand for graphic applications has in contrast suffered major losses. The development of computer-to-plate technology, that bypasses the need to transfer to film prior to making printing plates, as well as improved output using inkjet and laser printers have been the prime drivers of this trend.

One area in which silver photographic demand has bucked the trend and in fact has grown in recent years (although output is estimated to have been broadly unchanged last year), is in motion picture film. The large investment that has already been made in conventional technology and the huge fixed costs of replacement have acted as deterrents against a move to digital. Nevertheless, there are signs of change, albeit slow, within the industry. For instance, at the time of writing, around 4,000 digital cinema screens existed worldwide, compared to 1,700 one year ago. Although the figure is far from the estimated 146,000 conventional technology screens that comprise the balance, the 135% increase it marks would suggest a potential threat to conventional motion picture film.

Digital and Film Camera Sales



Digital camera sales include toy & entry level cameras
Source: Lyra Research Inc., Photofinishing News Inc.

As far as the performance of the individual categories are concerned, film, paper and lithographic applications, which together would account for around 50% of total silver use, continued to perform the worst (in the context of the Japanese market, our estimates are that all categories of offtake in 2006 were up or effectively flat due to the repatriation of production). In terms of Japanese photographic manufacturers' overall global output, the biggest declines were seen in these categories. In the context of lithographic, it is worth noting that whereas computer-to-plate (CTP) accounted for around 30% of the Japanese market in 2004/5, last year it rose to around 45%. As far as X-rays are concerned, GFMS estimate that at most this fell by a couple of percent in 2006, reflecting strong demand from developing countries where digital medical technologies have yet to make any significant inroads. On the motion picture front, digital technologies have yet to have a marked impact on offtake.

One final comment on the Japanese photographic market concerns the production of nitrates for non-photographic applications. GFMS information is that certain photographic companies are (and indeed, have

been for many years) producing nitrates that are not destined for photographic use, and that these volumes are quite substantial. Part of GFMS' reality check on our photographic numbers is to estimate the supply of silver to the photographic companies and to compare this with output data to confirm that the estimates in this *Survey* are accurate. Over the past few years, the flow of silver into the photographic companies has exceeded what we estimate is going into photographic uses, and the balance has been allocated to other industrial uses. However, these estimates are by their very nature subject to error, and it is possible that we have been overestimating photo demand and underestimating other industrial offtake associated with the photographic industry.

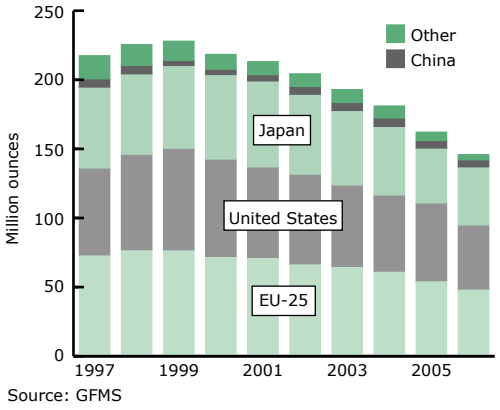
Due to the ongoing penetration of the digital camera, **Chinese** photographic demand fell a further 6% to 5.0 Moz (157 t) in 2006. The underlying reason behind the decline is the nation's rapid economic development and the increase in earning capacity for Chinese consumers living in the largest and mid-tier cities. The associated rise in consumer spending has provided a greater proportion of the population access to first generation digital cameras while higher wage earners have embraced the latest technology which is now as affordable as a new cell phone or MP3 player. In addition, technological advance has led to a wider range of digital products at varying price points being made available to consumers with different budgets.

Furthermore, the scope of consumers has expanded a little in recent years from technically "savvy" younger generations to now encompass the mainstream population who have a more stable financial basis and are showing a greater willingness to embrace technology. With the greater saturation of digital cameras has come the advancement of digital printers, which when first introduced were not widely used by consumers due to the higher cost per image. However, a reduction in cost and heavy promotion have led to an increase in digital images being printed rather being simply being stored on a hard drive of a personal computer.

While film use in the domestic market is slipping (as discussed above), the demand for large film used in the commercial environment partly offset this fall with offtake in this segment increasing year-on-year. In recent years, the liberalization of publishing, including newspapers and film, has lifted demand for silver halide paper and cinefilm. In 2006, the industrial value recorded by movies and the newspaper and printing industry both saw double-digital growth. Furthermore, with the government taking measures to crack down on pirated movies, more residents chose to go to theaters, which helped boost the cinematic industry and therefore film use.

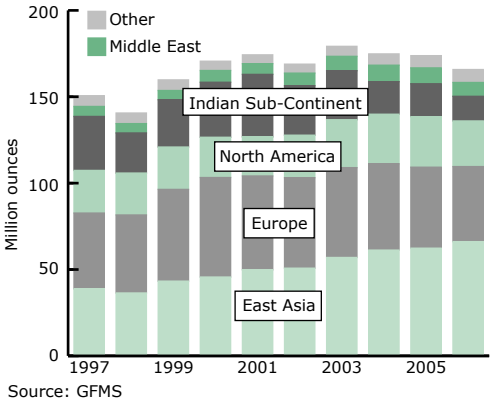
Lastly, the further introduction of X-ray facilities across China has also played a part in restricting the fall of silver use in the industry, as the modernization of the public health system and improved health awareness is leading to greater penetration of X-ray and other technical advances into smaller cities and rural areas. While digital based systems may eventually impact demand in the major Chinese cities, the growth of the health sector in the more isolated regions of China should see this segment of the market continue to stimulate demand.

World Photographic Fabrication



Source: GFMS

World Jewelry Fabrication



Source: GFMS

Jewelry

• ***Jewelry fabrication slipped by 5% in 2006 to a seven year low of 165.8 Moz (5,156 t), thanks in the main to higher and more volatile prices.***

• ***The three largest losses in tonnage terms occurred in India, Italy and then Mexico, while in contrast China enjoyed a sizable gain.***

Europe

Silver jewelry fabrication in Europe in 2006 dropped by 7% to 43.4 Moz (1,351 t). The change was dominated by the 3.3 Moz (104 t) slump for Italy as its industry suffered from both falling domestic sales and market share losses abroad to low labor cost countries such as China. Other European countries saw a mixed picture of gains and losses, typically of a small magnitude.

Italian silver jewelry demand fell for a sixth successive year and at a sharp rate, 11%, to 28.2 Moz (876 t). Much was driven by the marked fall in exports, which account for the vast bulk of offtake, with notable losses seen in all its major markets. Shipments to other EU countries, for example, fell by almost 10%, while those to the United States dropped by just over 5%. These losses cannot be ascribed to consumption as most of these markets enjoyed further growth last year, if often at a slightly slower pace than previously. The key driver of lower exports was instead competition from other countries, typically the lower labor cost producers in India and East Asia. This change, however, was due more to structural changes within western markets to higher labor, often gemset items, which favor Asian producers. It was not due to a loss of competitiveness at a mechanized level, with Italian chain often still the least expensive.

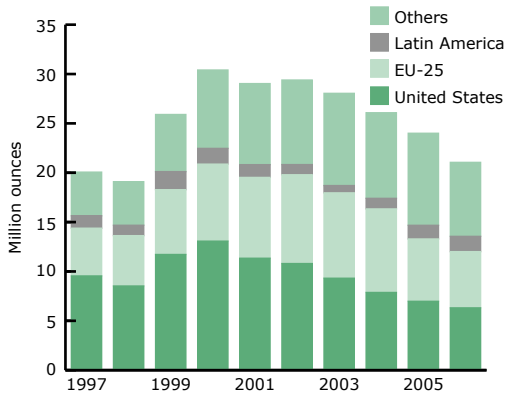
This above fact ushered in a complication to the trade figures for Italy. Exports of finished pieces to Asia fell sharply in 2006. However, growth in exports of chain on spool for handfinishing in countries such as China or Indonesia (often for re-export back to the West) meant the decline for all Italian fabricated jewelry items to Asia was much less than the 'headline' for finished pieces. The complications for silver stemming from a general triangulation of export flows, however, remain far less marked than for gold.

Italy's domestic market was neither immune from the effects of low cost competition as there are clear signs of imports gaining market share from local producers. More damaging, however, to the Italian industry was the slide in total consumption, which appears to have been just into double-digits in weight terms. This itself was largely blamed on the shift to other materials, such as new comer brass or quasi-ethnic items incorporating wood, though steel jewelry now appears to have plateaued. Further weight losses would also have been attributable to structural changes such as a move to branded, high design and gemset items, all of which would cut the amount of money being spent purely on metal. There also appears to have been a large cut in trade stocks.

While structural changes and the rise of low cost producers were arguably the key drivers of the change for Italy, price cannot be ignored as it exacerbated these issues and several smaller producers went bankrupt as poor financial management (perhaps more so than credit limit problems) left them unable to survive higher and more volatile prices and lease rates in 2006.

Jewelry demand in **Germany** was effectively flat in 2006 at 3.8 Moz (119 t). Domestic consumption looks to have grown once more, partly as a result of ongoing brand promotion, but any benefit from this was more than countered by imports' market share rising. Compensation materialized in the form of higher exports, though the scale of these gains in fine weight terms is thought to be far less than the reported 29% rise in their gross weight. Growth was possible here as the high quality niche in which many German companies operate was relatively unaffected by higher silver prices and competition from low labor cost countries.

Official Italian Jewelry Exports



Source: GFMS

Table 7 - Silver Fabrication: Jewelry and Silverware (including the use of scrap - million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Italy	44.8	45.3	51.4	54.7	48.6	46.0	44.4	42.3	38.4	34.2
Germany	9.8	9.6	9.8	9.1	8.7	7.9	7.7	7.3	6.8	6.7
Poland	2.3	2.7	2.9	3.0	2.5	2.3	2.9	3.1	3.4	3.6
Greece	4.5	4.1	4.1	3.3	3.0	2.8	2.9	2.9	2.9	2.8
France	2.2	2.6	2.7	2.8	2.7	2.7	2.6	2.2	1.8	1.8
Spain	4.0	4.1	3.4	3.0	2.4	2.4	2.4	2.0	2.0	1.6
UK & Ireland	3.4	3.3	3.1	3.2	2.9	2.2	1.6	1.5	1.4	1.3
Portugal	1.9	1.9	2.1	2.1	1.8	1.6	1.7	1.5	1.3	1.2
Norway	1.1	1.1	1.5	1.6	1.5	1.3	1.3	1.2	1.0	1.1
Sweden	1.3	1.0	1.0	0.9	0.6	0.7	0.8	0.9	0.9	0.8
Denmark	1.0	0.9	0.9	0.9	0.8	0.7	0.6	0.6	0.6	0.6
Switzerland	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finland	0.8	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3
Cyprus & Malta	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3
Other Countries	1.3	1.3	1.1	1.0	1.0	1.0	0.9	1.0	0.9	0.9
Total Europe	**79.0**	**79.2**	**85.2**	**86.9**	**77.6**	**72.5**	**70.9**	**67.4**	**62.3**	**57.6**
North America										
United States	12.6	12.6	13.1	13.4	13.0	13.7	15.1	15.4	15.7	15.0
Mexico	16.3	15.3	15.1	13.2	12.9	14.0	15.6	16.2	16.4	13.9
Canada	1.9	2.2	1.9	1.8	1.5	1.5	1.7	1.6	1.4	1.2
Total North America	**30.8**	**30.1**	**30.1**	**28.4**	**27.4**	**29.3**	**32.4**	**33.2**	**33.5**	**30.0**
Latin America										
Brazil	1.6	1.4	1.3	1.2	1.2	1.2	1.4	1.4	1.6	1.7
Peru	1.1	1.0	1.0	0.9	0.9	0.9	0.6	0.6	0.5	0.6
Colombia	0.8	0.8	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
Argentina	0.8	0.5	0.5	0.3	0.1	0.1	0.2	0.3	0.4	0.4
Ecuador	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3
Other Countries	1.4	1.7	1.9	1.2	0.9	0.8	1.0	1.2	1.3	1.4
Total Latin America	**6.3**	**6.1**	**5.7**	**4.5**	**4.1**	**3.9**	**4.0**	**4.3**	**4.6**	**5.0**
Middle East										
Turkey	5.5	5.2	4.7	6.0	5.3	6.8	7.9	8.7	8.3	6.6
Israel	2.2	2.1	2.1	1.9	1.8	1.8	1.8	1.8	1.9	1.9
Egypt	2.0	1.7	1.9	1.9	1.6	1.5	1.7	1.9	1.7	1.6
Saudi Arabia & Yemen	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7
Other Countries	2.6	2.4	2.5	2.6	2.7	2.5	2.6	2.7	2.8	2.8
Total Middle East	**12.9**	**12.0**	**11.8**	**13.0**	**11.9**	**13.2**	**14.5**	**15.7**	**15.3**	**13.5**
Indian Sub-Continent										
India	79.9	74.4	73.6	68.0	88.4	61.7	61.7	35.4	37.6	28.2
Bangladesh & Nepal	6.4	5.1	5.7	6.0	5.9	4.8	4.5	4.2	3.7	3.1
Other Countries	2.5	1.9	2.4	2.3	1.7	1.7	1.7	1.9	1.9	1.9
Total Indian Sub-Cont.	**88.7**	**81.5**	**81.7**	**76.3**	**96.1**	**68.2**	**67.9**	**41.5**	**43.3**	**33.3**
East Asia										
Thailand	27.9	27.9	30.8	30.8	32.7	32.3	36.2	36.9	36.8	36.8
China	3.7	4.8	6.9	9.1	11.5	14.3	17.1	20.5	22.6	25.8
Indonesia	3.6	2.6	3.1	3.7	4.7	4.0	4.1	5.2	4.5	5.1
South Korea	6.3	2.6	4.5	4.9	4.6	4.5	4.6	4.7	4.7	4.8
Japan	1.9	1.8	1.8	1.7	1.7	1.7	1.6	1.8	2.1	2.0
Vietnam	0.7	0.6	0.7	0.7	0.7	0.8	0.9	1.0	1.0	1.1

Table 7 - Silver Fabrication: Jewelry and Silverware (including the use of scrap - million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Myanmar, Laos & Cambodia	1.0	0.8	0.9	0.8	0.9	1.0	1.0	0.9	0.9	0.8
Malaysia	0.4	0.4	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7
Taiwan	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4
Hong Kong	1.0	0.6	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.4
Other Countries	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.3
Total East Asia	**47.3**	**42.9**	**50.5**	**53.6**	**58.6**	**60.1**	**67.2**	**72.7**	**74.4**	**78.2**
Africa										
Morocco	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Tunisia	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Algeria	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2
Other Countries	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total Africa	**1.2**	**1.2**	**1.1**	**1.2**	**1.1**	**1.1**	**1.2**	**1.2**	**1.2**	**1.2**
Oceania										
Australia	0.6	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7
Total Oceania	**0.6**	**0.7**	**0.8**	**0.8**	**0.7**	**0.8**	**0.7**	**0.8**	**0.7**	**0.7**
CIS										
CIS	0.8	0.7	0.8	0.9	1.3	1.7	2.5	3.5	4.4	4.7
Total CIS	**1.4**	**1.1**	**1.3**	**1.5**	**1.9**	**2.4**	**3.2**	**4.2**	**5.1**	**5.4**
World Total	**268.3**	**254.8**	**268.3**	**266.2**	**279.4**	**251.5**	**262.1**	**241.0**	**240.4**	**224.9**

Jewelry & Silverware

GFMS have produced the *World Silver Survey* for the Silver Institute since 1994. Until now, these *Surveys* separated the fabrication series into Industrial Uses, Photographic, Jewelry & Silverware and Coins & Medals. It was felt then that combining Jewelry & Silverware was satisfactory for statistical and analytical purposes. However, GFMS have become aware over the past few years that treating them as one demand line item was masking importantly differing trends. Indeed, although there has been no clear trend in the overall category over this time, its two components have fared very differently with jewelry tending to increase and silverware to decrease.

It is important to note that until 2005, GFMS did not have a high enough degree of confidence in the data for certain countries to split out jewelry from silverware. Having said this, our regular field research had started to point very clearly to divergent trends in key countries like India, and it became obvious that it was vital to split the series. The importance of separating the series was not just for historical interest either. In terms of our silver forecasting work, it became apparent that deriving a global time series for each category was necessary to generate sensible forward projections for demand and the price. This exercise has now been completed and *World Silver Survey 2007* splits out jewelry from silverware for the first time.

There are a few points of interest worth noting:

- *Jewelry and silverware's combined share of total global fabrication demand fell from 32% in 1997 to under 27% in 2006.*

- *Silver jewelry's share of total global fabrication demand has remained stable at around 20%.*

- *Silverware's share has declined sharply, halving between 1997 and 2006 (to just 7%).*

- *GFMS research on jewelry consumption, as opposed to fabrication, shows that the international trade in silver jewelry is expanding rapidly.*

- *Both silver jewelry fabrication and consumption have started to rise markedly in some of the key emerging economies such as China.*

Consumer Trends & Jewelry Consumption

Fashion or broader consumer trends are important in any review of jewelry consumption as factors other than the economic play a key role in this discretionary area. For example, looking at the French market, we need an explanation of why silver jewelry sales, with a rise of 2% (by piece), performed much better than gold, with a drop of 9%*. Price may well play a role but perhaps more so at the margin - France after all saw a rise in platinum jewelry sales. Such a divergence was common to most western jewelry markets in 2006 - US silver jewelry imports, for example, rose by 5% last year, yet inflows of gold jewelry fell by 18%.

One of the main causes of this differentiation by metal is that silver is still winning the youth vote, the younger category of consumers still seeing gold, in particular yellow, as dated or flashy. Secondly, we are still seeing an ongoing shift in attitudes with it becoming more common for consumers looking to buy jewelry either to spend a small amount on a one or two season accessory (where silver can pick up business) or part with serious cash on very expensive top end (often diamond-laden) pieces. This pattern of market polarization is by no means unique to jewelry as 'fast fashion' and international brands continues to grow in clothing.

The drift to branded also continues to play an important role in jewelry as the lower price of silver in relation to gold affords the brands the markup opportunities required to cover their advertising and service costs. As a result, what may seem fashionable can be just what the brands are promoting. Men's jewelry also continues to show signs of promising growth, benefiting from another trend - the increasing acceptability of jewelry wearing by men. This remains dominated by the base metals, such as steel or titanium, but there is some positive spin off for silver too. Germany acts as a good example of the above four trends as the market saw a further contraction in 8-karat gold, with some sales being lost to cheaper or heavily branded often unisex silver items.

While the above broad trends continue to favor silver, others can prove detrimental. One such obvious factor is the ongoing shift from plain to stone-set jewelry. In France, for example, sales (by piece) of plain silver fell by 1% in 2006, yet stone-set rose by 7%*. Similarly in the United States, stones such as turquoise, smoky quartz and diamond accents are reportedly strong. This drift will serve to cut the amount of money being spent purely on metal. The use in jewelry of materials of no intrinsic value, such as rubber or leather, also appears to remain on the rise. Bound up with these two and the rise of branding, silver is swinging towards higher design pieces from simpler forms, with the result that more of consumer expenditure is going to labor rather than metal. The return of the 'yellow look' would be another negative trend for silver but, while talked about much in glossy magazines, the spread to date of this look from top end high fashion to the mainstream remains quite limited. This could become more important and already there is talk of growing interest in gold plated jewelry, but at present this seems more of a threat to karat gold in middle-income countries.

By product, charms remain popular but these often have a gold with enamel focus and, more importantly, fashion is militating against weight by dumping heavy chains and bangles in favor of lighter weight items such as earrings. As a result, changes in sales by piece, value or fine weight can prove very different. A combination of the above factors has proved strong enough in some countries, for example Italy, to cut silver jewelry consumption, with high design costume jewelry, perhaps in steel or even brass, being singled out as a key driver in that market.

The review might seem 'western-centric' but consumption is dominated by this group (the United States and the big four Europeans account for roughly half of global jewelry consumption versus a share of around a fifth for gold). This dominance is yet greater if we strip out those markets, such as India, where price is king. However, as Asian industrialization continues apace, we may well soon need to be as aware of the latest trends in Mumbai or Shanghai.

** figures courtesy of Société 5*

Illustrations of 2007 Trends

left - skull, tusk & cross pendant in silver and onyx from Thomas Sabo's unisex 'Rebel at Heart' range; bottom left - silver & cubic zirconia earrings (photo courtesy of WILH. MÜLLER, Germany)

Above - Sterling Silver Charms by Tiffany & Co. (Photo Credit: Richard Pierce)

French jewelry fabrication also bucked the global trend by rising a fraction. Domestic consumption was flat in weight terms and local producers seemed not to face quite the same threat from imports due to retailers and wholesalers' apparent reluctance to switch to untried, distant sources. Gains instead were based on a positive swing in the net trade in jewelry semi-manufactured items, for example through higher shipments of semis to transplant factories in North Africa.

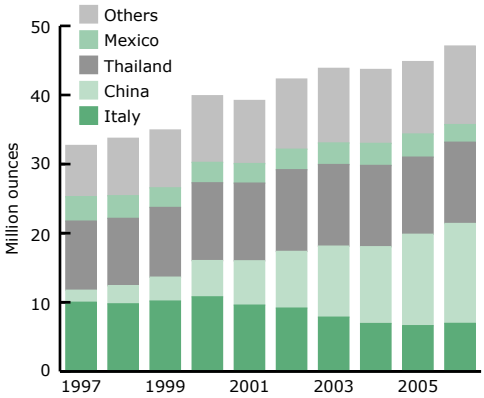
The sharp fall in the hallmarking of jewelry and silverware in the **United Kingdom** was largely due to a shift to lighter items, which would not necessarily have been stamped, than a steep fall in jewelry demand. In addition, uncertain trading conditions led to a period of de-stocking at the retail level. Although this had a more severe impact on overseas suppliers than domestic manufacturers, this is not suggestive of a reversal of recent years' trend of importers continually taking market share from UK operations. Instead it reflects that UK manufacturing is nearing the bottom of a core base of output, largely made up of niche high-end producers.

North America

The fall in jewelry fabrication last year in the **United States** was effectively a product of market share loss to overseas suppliers, particularly to the benefit of China and Thailand. The estimated 5% rise in the volume of jewelry imports therefore provides a better indication of the trend in domestic consumption, which continued to grow in 2006. This was a product of two quite separate developments. Firstly, white jewelry remained in vogue particularly among younger consumers, which were attracted not only by the metal itself but also by the lower-price points, which are generally associated with silver. Secondly, high and volatile gold prices encouraged a growing number of retailers to reallocate a small portion of their shop window to silver jewelry, attracted by the significantly higher margins available on these styles. A by-product of this trend was the introduction of more design-oriented pieces, set with a greater variety of stones, such as diamond accents and colored gems, with each line designed to portray the retailers' desire to be seen to offer a greater perceived value.

As alluded to above, Thailand and China cemented their position as the two foremost jewelry suppliers to the US market, with combined growth of 7% year-on-year. Last year, these two together accounted for some 56% of

US Silver Jewelry Imports



Source: GFMS

total US imports, compared with a little over one-third 10 years ago. This impressive performance has come at the expense of both higher cost suppliers, and none more so than Italy, as well as suppliers of plain silver products (this also includes Italy but Mexico has suffered in this regard) as retailers have, as discussed above, shifted to more design-oriented gemset pieces.

Mexican jewelry production fell by over 14% to 12.0 Moz (372 t) in 2006. The main reason for the decline was a drop in exports to the key US market. Although taken at face value, the official trade data exaggerates the fall, due to distortions stemming from the large-scale tax fraud that affected part of the industry in 2004-05, GFMS' analysis shows that Mexican producers have been losing out to foreign competitors, especially those located in China and India. Indeed, taking a longer view, Mexico's share of official US silver jewelry imports has almost exactly halved in the last 10 years from the 11% level the country attained in 1997. Rapid growth in US consumption over much of the past decade essentially masked a substantial decline in the competitiveness of the relatively high labor cost Mexican industry.

Domestic sales, in contrast, seem to have held up fairly well last year, in part due to a shift, at the margin, in local consumption from expensive gold to more affordable silver jewelry.

Middle East

The 13% fall in Middle East jewelry fabrication, chiefly the product of a sharp decline in Turkish production, left the regional total at a four-year low.

Table 7a - Silver Fabrication: Jewelry (including the use of scrap - million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Italy	25.7	26.7	34.0	38.9	37.2	36.7	35.7	34.2	31.5	28.2
Germany	3.5	3.5	4.1	3.6	3.7	3.3	3.6	3.7	3.8	3.8
Poland	2.2	2.6	2.8	2.9	2.4	2.2	2.8	3.0	3.3	3.5
France	2.0	2.4	2.5	2.6	2.5	2.4	2.4	2.0	1.5	1.6
Spain	1.8	1.7	1.4	1.4	1.4	1.5	1.7	1.4	1.4	1.3
Portugal	1.7	1.7	1.9	1.9	1.6	1.4	1.5	1.4	1.2	1.1
Greece	1.3	1.2	1.2	1.0	1.0	0.9	1.0	1.0	1.1	1.1
UK & Ireland	2.9	2.8	2.7	2.8	2.5	1.8	1.2	1.2	1.0	1.0
Sweden	0.6	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4
Denmark	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3
Switzerland	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Cyprus & Malta	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Norway	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Finland	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Austria	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Other Countries	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.6
Total Europe	**43.9**	**45.1**	**53.1**	**57.6**	**54.3**	**52.4**	**52.0**	**50.0**	**46.9**	**43.4**
North America										
United States	10.0	10.2	10.8	11.2	10.9	11.8	13.4	13.8	14.1	13.5
Mexico	13.1	12.3	12.1	10.5	10.4	11.5	13.0	13.6	14.0	12.0
Canada	1.6	1.8	1.6	1.6	1.3	1.3	1.4	1.4	1.2	1.0
Total North America	**24.7**	**24.3**	**24.5**	**23.3**	**22.6**	**24.6**	**27.7**	**28.7**	**29.3**	**26.4**
Latin America										
Brazil	1.4	1.3	1.2	1.0	1.0	1.0	1.2	1.3	1.4	1.5
Peru	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4
Argentina	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.3
Colombia	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Ecuador	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Other Countries	1.2	1.4	1.6	0.9	0.7	0.6	0.7	0.9	1.1	1.2
Total Latin America	**4.0**	**4.0**	**3.9**	**3.0**	**2.7**	**2.5**	**2.8**	**3.1**	**3.4**	**3.7**
Middle East										
Turkey	2.3	2.1	1.9	3.2	3.0	4.1	5.0	6.0	5.7	4.5
Egypt	1.6	1.4	1.5	1.5	1.3	1.2	1.4	1.5	1.4	1.3
Saudi Arabia & Yemen	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6
Israel	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Other Countries	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.2
Total Middle East	**5.8**	**5.4**	**5.4**	**6.8**	**6.2**	**7.3**	**8.3**	**9.5**	**9.2**	**8.0**
Indian Sub-Continent										
India	27.6	20.9	24.4	28.4	33.2	25.9	25.7	16.1	16.4	11.9
Bangladesh & Nepal	2.2	1.4	1.9	2.4	2.2	2.0	1.9	1.9	1.8	1.5
Other Countries	1.4	0.9	1.1	1.0	0.8	0.8	0.8	0.8	0.9	0.9
Total Indian Sub-Cont.	**31.3**	**23.2**	**27.4**	**31.8**	**36.2**	**28.7**	**28.4**	**18.8**	**19.0**	**14.2**
East Asia										
Thailand	24.0	24.4	27.3	27.2	28.8	28.4	32.1	32.5	32.3	32.5
China	2.8	3.7	5.3	7.0	8.8	11.0	13.1	15.6	17.4	20.2
Indonesia	3.0	2.2	2.7	3.2	4.1	3.3	3.5	4.5	3.7	4.4
South Korea	4.4	2.1	3.7	4.0	3.8	3.8	3.9	4.0	3.9	4.0

Table 7a - Silver Fabrication: Jewelry (including the use of scrap - million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Myanmar, Laos & Cambodia	0.6	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6
Malaysia	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
Taiwan	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3
Hong Kong	0.7	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.3
Other Countries	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
Total East Asia	**38.8**	**36.4**	**43.3**	**45.6**	**49.8**	**50.8**	**57.0**	**61.2**	**62.3**	**66.1**
Africa										
Morocco	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Tunisia	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Algeria	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Countries	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total Africa	**1.0**	**0.9**	**0.9**	**0.9**	**0.9**	**0.9**	**0.9**	**0.9**	**0.9**	**0.9**
Oceania										
Australia	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6
Other Countries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Oceania	**0.5**	**0.7**	**0.7**	**0.8**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**
CIS										
Russia	0.3	0.2	0.3	0.3	0.4	0.6	0.9	1.2	1.5	1.6
Other Countries	0.4	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6
Total CIS	**0.7**	**0.6**	**0.7**	**0.7**	**0.9**	**1.1**	**1.4**	**1.8**	**2.1**	**2.2**
World Total	**150.6**	**140.6**	**159.8**	**170.6**	**174.3**	**168.9**	**179.2**	**174.8**	**173.8**	**165.8**

Turkish jewelry fabrication fell by some 20% in 2006, to 4.5 Moz (141 t), which represented a four-year low. However, the picture on the ground was not altogether clear last year. Credit problems across swathes of the wholesale trade resulted in a sustained period of destocking, which contrasted with apparently healthy sales of jewelry at the retail level. The inventory run down appears to have caused the closure of a number of small factories while other companies located along the supply chain moved away from silver, often in favor of steel jewelry, motivated in part by the higher margin these products attract.

The modest fall in **Egyptian** jewelry demand occurred despite a shift by several small workshops to silver, at the expense of gold and underlying growth in retail consumption. Overall though, the growth in consumption in 2006 was largely satisfied by rising imports of finished pieces, of which there has been a growing trend to replicate gold designs set with cubic zirconia. And given that a considerable portion of the imported silver was plated with rhodium, there was a clear strategy to target younger consumers deterred by rising price points associated with gold jewelry.

Indian Sub-Continent

In 2006, silver jewelry fabrication in India fell sharply, by around 28%, from 16.4 Moz (510 t) in 2005 to 11.9 Moz (369 t). The price sensitive nature of demand for jewelry in India was very much in evidence during 2006 as the 61% rise in the average local silver price. Indeed, many of the retailers visited by GFMS on our research trips reported yet steeper declines than this, but our supply side data points to a fall of this magnitude.

Given that this is the first time GFMS have split out jewelry from silverware, it is useful to put last year's fabrication in historical context. Basis our estimates, the most recent high for silver fabrication was in 2001 when offtake pushed above 33 Moz (1,000 t), a figure that was also close to the all time high of over 35 Moz (1,100 t) seen way back in 1993. Silver jewelry has fallen from a peak of over 30% of the total demand in the 1990s to just 13% in 2006. This puts into perspective silver jewelry's dramatic fall from grace in India in recent years, in particular when viewed against bar and coin, where, although demand fell modestly last year, the category had previously enjoyed a period of growth (see Chapter 3).

Returning to 2006, at first sight a greater fall in jewelry might have been expected given the paltry level of bullion imports during the year, but as is discussed in detail in Chapters 5 and 6, not only was scrap higher but there was also substantial destocking which boosted local supplies of the metal (both from private stocks and the sale of mint silver by government agencies). Notwithstanding these additional supplies, GFMS research does point to substantially less metal going into jewelry fabrication, in contrast to say industrial uses where offtake rose. The key factor underpinning the weakness in jewelry fabrication was, as already mentioned, the price. Of particular significance was the volatility in the price, although in the case of silver (compared with gold) the absolute price level, and certain key price triggers, appear to have been important too.

Although price has played a role in falling silver jewelry offtake, GFMS field research does point to other factors being at work. Firstly, there appears to be a secular shift in demand (as is evident in gold) away from jewelry to bars and coins (here it must be noted that silverware demand too has declined). Secondly, the issue of under-title jewelry is far more acute in silver than in gold. By contrast with gold, there is not even a token hallmarking system in place for silver, and the received wisdom is that the bulk of jewelry is sold at purities lower than advertised. It seems highly probable that growing consumer awareness of this problem may have impacted negatively on the consumption of jewelry. Finally, silver jewelry faces competition from the rapid growth in costume jewelry. The growth in this segment has been around 20-25% per annum for the last few years, and it competes directly on price with silver.

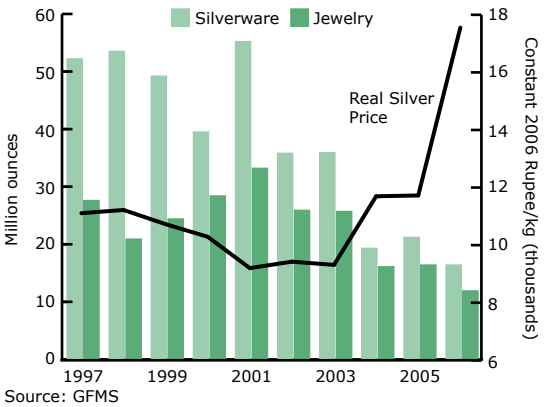
East Asia

Thailand's silver jewelry demand remained broadly unchanged in 2006 at 32.5 Moz (1,012 t), which enabled the country to retain the title of the world's largest jewelry fabricator. The stable result for jewelry output may come as a surprise, since other developing countries in the region fared far better than Thailand in maintaining and building export sales. This was largely the result of Thailand's export oriented manufacturing sector being constrained by the baht gaining over 17% against the US dollar. However, some compensation emerged in the form of stronger western jewelry consumption, plus a swing within that to high labor and gemset pieces, which would tend to favor East Asian over western producers.

While the general rise in precious metal prices brought some benefits for silver jewelry due to an apparent shift from gold to cheaper alternatives such as silver, higher silver prices hit manufacturers' profitability. On a recent research trip to Thailand, several fabricators lamented that the rise in the silver price had severely dented their profit margins as they were often forced to absorb a large portion of the metal price increase in a bid to remain competitive (metal costs typically account for 30% of the value of the jewelry item). In fact, there were reports of several family run businesses closing last year as they were not able to compete at such low operating margins.

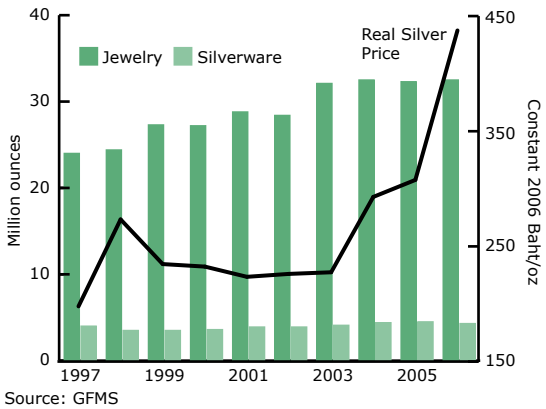
Apart from the competition from other fabricating nations, especially from China which dominated export growth into the United States, local fabricators also had to compete with a shift to an even lower cost alternative source of jewelry, that of stainless steel. Local consumption of the "other" white metal was notably higher last year

Indian Jewelry and Silverware Fabrication



Source: GFMS

Thai Jewelry and Silverware Fabrication



Source: GFMS

Table 7b - Silver Fabrication: Silverware (including the use of scrap - million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Italy	19.0	18.6	17.4	15.8	11.4	9.3	8.7	8.1	6.9	6.0
Germany	6.3	6.2	5.7	5.5	5.0	4.5	4.1	3.5	3.0	2.9
Greece	3.2	2.9	2.9	2.3	2.1	1.9	1.9	1.9	1.8	1.7
Norway	0.9	1.0	1.3	1.4	1.3	1.1	1.1	1.0	0.9	0.9
Sweden	0.7	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.4
Spain	2.2	2.3	1.9	1.5	1.1	0.9	0.8	0.7	0.5	0.4
Other Countries	2.8	2.6	2.4	2.2	2.1	1.9	1.9	1.8	1.7	1.7
Total Europe	**35.1**	**34.1**	**32.1**	**29.3**	**23.3**	**20.1**	**18.9**	**17.5**	**15.4**	**14.1**
North America										
Mexico	3.3	3.1	3.0	2.6	2.4	2.5	2.7	2.6	2.5	1.9
United States	2.5	2.4	2.3	2.2	2.1	1.9	1.8	1.6	1.5	1.4
Canada	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
Total North America	**6.1**	**5.8**	**5.6**	**5.1**	**4.8**	**4.7**	**4.7**	**4.5**	**4.3**	**3.5**
Latin America										
Colombia	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3
Peru	0.7	0.6	0.6	0.5	0.5	0.5	0.3	0.3	0.3	0.3
Other Countries	1.2	0.9	0.8	0.7	0.6	0.6	0.5	0.6	0.7	0.7
Total Latin America	**2.4**	**2.1**	**1.8**	**1.6**	**1.4**	**1.4**	**1.2**	**1.2**	**1.2**	**1.3**
Middle East										
Turkey	3.2	3.1	2.8	2.7	2.3	2.7	2.9	2.8	2.6	2.1
Israel	1.7	1.6	1.6	1.5	1.4	1.4	1.4	1.4	1.4	1.4
Egypt	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2
Other Countries	1.8	1.5	1.6	1.6	1.7	1.5	1.6	1.7	1.7	1.7
Total Middle East	**7.1**	**6.6**	**6.4**	**6.2**	**5.7**	**5.9**	**6.2**	**6.2**	**6.1**	**5.5**
Indian Sub-Continent										
India	52.2	53.5	49.2	39.5	55.2	35.8	35.9	19.3	21.2	16.4
Bangladesh & Nepal	4.2	3.7	3.8	3.6	3.7	2.8	2.6	2.3	1.9	1.6
Other Countries	1.1	1.1	1.3	1.2	0.9	1.0	1.0	1.0	1.1	1.1
Total Indian Sub-Cont.	**57.5**	**58.3**	**54.4**	**44.4**	**59.9**	**39.6**	**39.5**	**22.6**	**24.2**	**19.0**
East Asia										
China	0.9	1.1	1.6	2.1	2.7	3.3	3.9	4.8	5.2	5.6
Thailand	4.0	3.5	3.5	3.6	3.9	3.9	4.1	4.4	4.5	4.3
South Korea	1.9	0.5	0.8	0.8	0.8	0.7	0.7	0.7	0.8	0.7
Indonesia	0.6	0.4	0.4	0.5	0.6	0.7	0.7	0.8	0.8	0.7
Other Countries	1.2	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.7
Total East Asia	**8.5**	**6.4**	**7.2**	**8.0**	**8.8**	**9.3**	**10.2**	**11.4**	**12.0**	**12.1**
Africa										
Africa	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total Africa	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**
Oceania										
Australia	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Oceania	**0.0**	**0.0**	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CIS										
Russia	0.5	0.4	0.5	0.6	0.8	1.1	1.6	2.3	2.8	3.0
Other Countries	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Total CIS	**0.7**	**0.5**	**0.7**	**0.8**	**1.0**	**1.3**	**1.8**	**2.5**	**3.0**	**3.2**
World Total	**117.7**	**114.2**	**108.6**	**95.6**	**105.2**	**82.6**	**83.0**	**66.2**	**66.6**	**59.1**

driven in part by the youth demographic, as was the fall in some plain silver jewelry export lines that competed with this modern trend. While some of this product range which consisted mainly of chain and pendants was manufactured in Thailand, an increasing amount found its way to the Thai and foreign markets from Vietnam.

In terms of jewelry styles, further pressure from gemset designs has led a reduction in average weights, with the majority of pieces aimed at the broader markets containing less then $4 of silver. However, there were some exceptions, as is the case with the heavy set designs of Italian fashion brand "Pianegonda", which while made in Thailand typically sells for more than €300 in European retail outlets. Looking ahead, traders anticipate that the antique look will be very strong in 2007 with orders for oxidized and previous era designs expected to be strong in western markets.

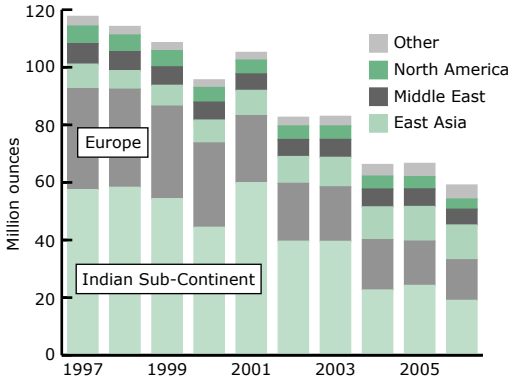
As outlined in Chapter 6, the largest source of silver supply for the Thai industry is China. As discussed in previous *Surveys*, the quality of some Chinese material can be questionable and often ranges from 97% to the good delivery standard of 99.9%, though it has been the impurities, rather then the purity, in the metal that has caused most problems. Moreover, the larger fabricators have taken to blending sources in an effort to meet quality assurance testing criteria. However, at the lower end of the market, high levels of impurities and an increase in under-karating remain a significant problem with silver jewelry often stamped 925 purity and exported, when in reality it may be well below this level. Wholesalers often turn a blind eye to this issue in a bid to trade this often discounted jewelry range.

Amid an environment of soaring precious metal prices, **Chinese** silver jewelry offtake recorded a year-on-year increase of 16% in 2006 to 20.2 Moz (627 t). Although the local silver price recorded a year-on-year increase of 54%, unlike gold and platinum, the increase was not transferred to the consumer because manufacturers could absorb a large portion of the additional cost caused by rising prices on the basis of lower profit margins. Silver has benefited from the demand for the "white" look with silver jewelry designs now mirroring those in white gold (and platinum and palladium) at a far lower price point. In 2006, several specialized silver jewelry outlets opened in the larger cities as demand increased, due to strong industry promotion, while in existing retail outlets silver fashion jewelry gained a greater portion of display space. Moreover, with the popularity of internet shopping among the younger generation, silver jewelry has become a major product traded in this way as the fashion driven youth market keeps up with global trends. The Chinese silver fabrication industry has continued to expand by increasing local consumption as well as by taking market share in key export destinations. Last year, exports of silver jewelry to the key market of the United States rose by over 9% (in fine silver terms) while shipments to Europe also continued to increase.

Jewelry demand in **South Korea** rose 3% in 2006 to 4.0 Moz (126 t). Silver jewelry has emerged as a real alternative to gold, with manufacturers offering similar designs to those in the higher priced metal. Heavy advertising of branded silver designs has led to a rise in consumption and the opening of silver jewelry specific outlets for this fashion driven market. Additional local sales made up for a further fall in exports, with available data suggesting exports to the major US market down as much as 40% year-on-year.

Indonesian silver jewelry demand increased by 18% to 4.4 Moz (137 t) (in contrast to losses in silverware), thanks mainly to a strong surge in exports. Jewelry shipments to the United States, for example, grew strongly last year, with a near 27% rise in fine silver terms, after this trade fell away sharply in 2005. Tourist numbers, however, have yet to rebound after the Bali bombing decimated the industry and, with a further fall of 4% last year, this vital trade was widely missed by local traders as a large portion of sales is direct to visitors.

World Silverware Fabrication



Source: GFMS

Silverware

• ***Silverware fabrication fell by over 11% to 59.1 Moz (1,838 t), with almost 60% of the gross decline due to India, where the price rise hit hard.***

European silverware fabrication fell by 8% to 14.1 Moz (439 t) or a mere 40% of its level a decade earlier. While the vast majority of countries saw losses, the bulk of the decline in 2006 was due to Italy, where offtake fell by some 13% to 6.0 Moz (188 t).

The main area of losses for **Italy** remained the domestic market as there was a further slide in sales of hollowware, the traditional heavy pieces. Cutlery saw a smaller drop while what could be termed 'giftware' was comparatively stable. Those losses that occurred were primarily driven by a continuation of the cultural shift whereby silverware is coming to be seen as somewhat dated and no longer an obvious choice as a wedding present. Photoframes were another broadly steady area, particularly at the bottom end of the market. Evidence for this lies in industry comment that production of thin film silver or 'bilaminato' was stable. This film, which can go down to a mere 20 microns, is a technically demanding area and so its fabrication has not had to face the competition from low labor cost countries that more traditional sectors have. This helps explain why exports of silverware did not suffer as badly as the domestic market, with shipments only falling by 4% in gross weight terms. Not all export success, however, was at the lower end of the market as shipments of expensive show pieces to the newly wealthy of Russia, the Middle East and East Asia are also reported to have had a good year.

In stark contrast to the global trend, **Russian** demand for silverware has increased dramatically in recent years. Local fabrication, for example, grew by 7% in 2006 to reach some five times its level in 2000. Consumption of silverware has been driven by strong growth in disposable incomes plus the local taste for heavyweight items such as flatware and, to a lesser extent, silver cutlery. The giftware and ceremonial pieces categories have also seen a noteworthy rise in demand.

It was of little surprise to see a further drop in **US** silverware fabrication last year, which has suffered from a structural decline over the past decade. Inasmuch, there was little to distinguish developments in 2006 from those of recent years, namely a desire among younger people, in particular, to opt for stainless steel cutlery sets and lower demand for wedding pieces. A reduction in retail outlets offering silverware products has also played a part although, to partially compensate, much of the trade has shifted to the internet. However, the decline in fabrication for the home market was partially offset by rising exports, primarily of branded products, with Japan accounting for much of the additional demand last year. Elsewhere in the region, **Mexican** silverware fabrication suffered a serious price-induced setback in 2006, slumping in volume terms by no less than 23% year-on-year. The higher silver price led to a reduction in manufacturers' margins and compromised the trade's ability to finance both work-in-progress and inventories.

The 10% fall in the Middle East was largely attributable to significantly weaker output in **Turkey** where a growing trend away from silverware was exacerbated by the impact of rising silver prices, which encouraged a shift in demand towards smaller items. It was a similar story in **Egypt** where high silver prices resulted in a shift towards lighter and smaller products. Anecdotal evidence has also pointed to a shift towards 80% silver products at the expense of 90% and sterling silver. In contrast, **Israeli** silverware fabrication in 2006 was generally flat year-on-year. This resilience was the product of healthy demand both in local and export markets (the bulk of which was accounted for by the United States).

Indian silverware fabrication fell by 23% to 16.4 Moz (509 t) during 2006, a not altogether surprising result considering the sharp 53% rise in the local silver price during the year. In terms of consumption, however, there were indications that stocks with traders, manufacturers and retailers were higher at year-end suggesting that actual consumer offtake fell more markedly. Significantly, GFMS data points to silverware having fallen less than jewelry, reflecting the fact that there are differing motivations behind consumer purchases of these two categories, and their respective price sensitivities.

Considering this is the first time GFMS have split out jewelry from silverware, it is useful to place last year's fabrication in historical context. Silverware offtake touched all of 53.5 Moz (1,665 t) as far back as 1998, at the same time as the Indian precious metals market was being liberalized. Since then, there has been a precipitous decline in demand, with last year's total the

lowest in fourteen years. This is partly due to price factors, but secular shifts in demand towards other consumer items and gold have played a role too.

Returning to offtake in 2006, one of the reasons that silverware was less affected by the price (than jewelry) is that silverware demand is very closely tied to gift giving, which is widespread in India, and which is not entirely discretionary. For example, silverware giving is common in key festivals like diwali, dassera, dhanteras, and is also regularly gifted between family members, friends and acquaintances throughout the calendar year. During these events, gifting is seen as "essential". Furthermore, gifting begins with the birth of a child and continues through various anniversaries (birthdays, marriages and so on) and religious functions (not just the main festivals) right through to the death of a person, and has to be done irrespective of the price. Corporate gifting also forms a major component of the demand for silverware, and this is typically less price sensitive.

In recent times, and especially on the back of low purity mint silver, the quality of silver in silverware, and in particular jewelry, has become a contentious issue for consumers of silver. There is little doubt that this had begun to have an impact on silverware, although the fact that it is typically not seen as an investment option has mitigated its effects on demand (the investment motive is more important in the case in jewelry).

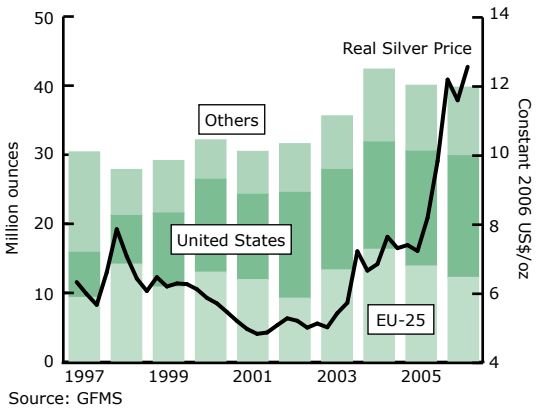
Thailand has remained a dominant fabricating nation over the last decade and its silverware fabrication grew over much of the period. However, last year fabrication of silverware is estimated to have slipped 4% to 4.3 Moz (134 t) due to stiff competition from China and a shift in consumer demand to more modern household items. The majority of Thailand's silverware production is now based in Bangkok though the silverware industry originated from the northern regions of the country.

The most common products produced by the Thai industry remain ceremonial bowls and boxes of assorted sizes, usually adorned with elaborate decorations, either figures or traditional Thai motifs. However, modern manufacturing methods have been introduced to meet demand for a greater selection of tableware and household items which are now manufactured and exported to the newly wealthy of the Middle East and Europe. Cutlery demand was notable weaker last year as cheaper alternatives continue to erode this traditional market. In addition, while the majority of Thai production is exported via official channels, a significant portion departs the country unofficially, purchased as souvenirs by tourists visiting the fabrication hubs of Bangkok and the Chang Mai region.

Silverware demand in **China** recorded an 8% increase in 2006 to 5.6 Moz (175 t), with most of the country's production exported to the US, European, and Middle Eastern markets via well established Hong Kong trading channels. While exports were modestly higher last year, due to further market share gains, domestic consumption is also estimated to have risen with the modernization of manufacturing techniques and design.

The ability to own a range of silverware has become more affordable for the average Chinese citizen with small items like photoframes and tableware dominating sales. There has also, however, been something of a trend away from heavier, solid pieces, to more affordable lighter, sometimes plated items. Silverware given as a gift remains popular with simple table settings of chopsticks and bowls a common occurrence, while water jugs or cups have also gained in popularity due in part to the perceived health benefits of silver. Moreover, gifted silverware with refined and complex patterns has grown in popularity in the second and third tier cities. Silver cutlery consumption in China remains weak due to cultural factors but, thanks to low manufacturing and labor costs and an improvement in quality, this sector has enjoyed some success in taking export market share from more established fabricating countries.

World Coin Fabrication



Source: GFMS

Table 8 - Silver Fabrication: Coins and Medals (including the use of scrap - million ounces)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
United States	6.5	7.0	10.7	13.4	12.3	15.3	14.5	15.5	16.6	17.6
Germany	5.3	10.0	7.0	8.8	8.1	6.0	9.7	9.7	9.7	8.6
Canada	0.7	1.1	1.4	1.0	0.9	1.0	0.3	1.3	1.6	2.9
Mexico	0.4	0.2	0.4	0.7	1.1	1.1	1.5	2.7	2.6	1.9
China	2.8	2.4	2.3	1.2	1.5	2.1	2.3	2.3	1.8	1.6
Spain	1.8	1.7	1.5	1.8	1.8	1.5	1.1	2.2	1.7	1.5
Australia	0.8	1.0	0.9	1.0	0.8	0.6	1.3	1.3	1.0	1.4
France	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.5
Austria	0.3	0.3	0.3	0.2	0.3	0.4	0.4	0.5	0.6	0.5
Poland	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.6	0.6	0.5
UK & Ireland	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
Switzerland	0.6	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3
Russia	0.4	0.2	0.2	0.1	0.2	0.3	0.4	0.4	0.4	0.3
Portugal	0.8	1.0	0.9	1.2	0.7	0.0	0.8	2.4	0.3	0.2
Other Countries	8.8	1.5	2.0	1.4	1.3	1.5	1.6	2.2	1.7	1.6
World Total	**30.4**	**27.8**	**29.1**	**32.1**	**30.5**	**31.6**	**35.6**	**42.4**	**40.0**	**39.8**

Coins & Medals

• ***Weaker European output offset growth in North America, leaving global coin fabrication below 40 Moz for the first time in three years.***

There was little change in world coin fabrication last year with the 2006 total slipping less than 1% to 39.8 Moz (1,237 t). In spite of this somewhat uneventful outcome, there were some notable changes among the top coin producers.

In the **United States**, higher minting of the 1-ounce Eagle bullion coin, which amounted to an additional 1.6 Moz (49 t), was the prime reason for the country's 6% rise in silver coin minting. Two-third's of last year's production of Eagles was concentrated in the first six months, primarily the result of an increase in dealer stocks rather than a sustained rise in investor demand. This development was confirmed by the weakness in Eagles sales over much of the second half before the customary rise in end-year sales (although the December total still represented the lowest level since end-2001). This outcome may appear counter-intuitive, given the run-up in silver prices, which may have been expected to produce an increase in investor purchases, but instead it appears as though the US market saw a rise in both buy and sell-side activity (a situation which carried over into early 2007 and appears to largely explain the 40% decline in coin sales over the first four months of 2007).

For the North American region as a whole, coin demand rose by some 1.5 Moz (47 t) year-on-year, with the growth in the United States augmented by record output in Canada, while Mexico saw its coin production fall to a three-year low. **Canada's** strong performance was entirely a function of a more than doubling of Maple Leaf bullion coin demand, which comfortably offset a decline in the country's commemorative coin minting. In contrast, the 28% reduction for **Mexico** was partly due to a lower outturn of Libertad coins in the wake of a price-related rise in coin dishoarding, which reduced the need last year for dealers to purchase newly minted pieces.

In Europe, total minting fell by a little over 1.7 Moz (52 t) to a four-year low. This outcome was largely due to a 12% fall in **Germany's** fabrication of its circulating coins. Whereas 2005 had seen the country produce six coin issues, for a total of 14.9 million pieces (with each coin struck in sterling silver, with a gross weight of 18.8 grams), last year the minting of one fewer issue, equivalent to 2.1 million coins (with the exception of one special issue, all German coin series comprise 1.8 million pieces of "standard" quality and 300,000 proof coins), left the total at below 10.0 Moz (300 t) for the first time since 2001. The only other major coin fabricator in Europe, **Spain**, saw its coin output fall by 15% last year as a result of lower minting of its €12 silver circulating coin (which replaced the Peseta 2,000 circulating edition in 2002). Last year, nearly 1.4 million coins were struck, compared with close to 1.9 million pieces in 2005.

8. Appendices

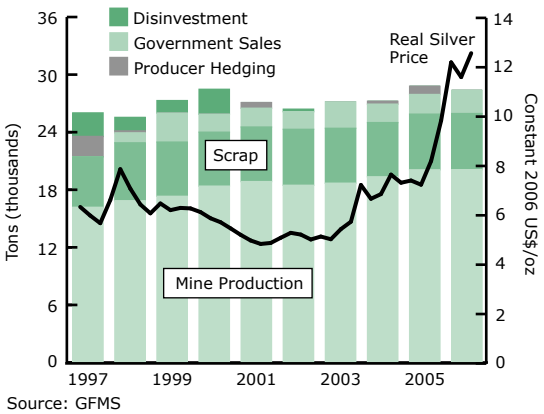
Contents

Appendix 1

Table 1 - World Silver Supply and Demand (tons) © GFMS / The Silver Institute

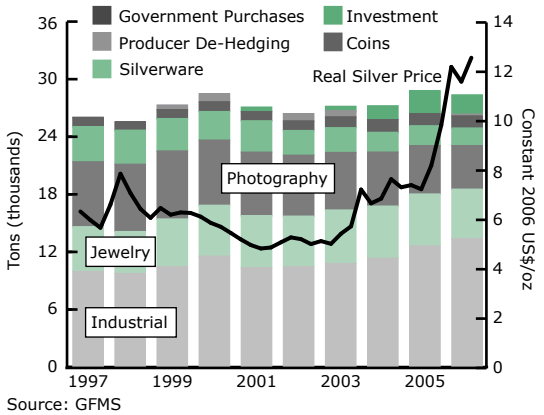
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Supply										
Mine Production	16,174	16,860	17,319	18,378	18,853	18,468	18,683	19,353	20,082	20,095
Net Government Sales	-	1,041	3,022	1,874	1,961	1,841	2,759	1,924	2,051	2,415
Old Silver Scrap	5,265	6,032	5,647	5,621	5,684	5,830	5,721	5,646	5,797	5,848
Producer Hedging	2,118	203	-	-	587	-	-	299	859	-
Implied Net Disinvestment	2,454	1,406	1,305	2,598	-	258	-	-	-	-
Total Supply	**26,011**	**25,542**	**27,294**	**28,470**	**27,084**	**26,397**	**27,164**	**27,222**	**28,788**	**28,358**
Demand										
Fabrication										
Industrial Applications	9,938	9,741	10,455	11,549	10,340	10,467	10,786	11,329	12,622	13,375
Photography	6,761	7,011	7,087	6,790	6,628	6,353	5,999	5,629	5,040	4,535
Jewelry	4,685	4,373	4,970	5,306	5,420	5,252	5,573	5,437	5,406	5,156
Silverware	3,660	3,551	3,376	2,974	3,271	2,570	2,580	2,060	2,072	1,838
Coins & Medals	945	866	907	999	948	983	1,108	1,318	1,245	1,237
Total Fabrication	25,989	25,542	26,795	27,618	26,607	25,625	26,046	25,774	26,386	26,142
Net Government Purchases	22	-	-	-	-	-	-	-	-	-
Producer De-hedging	-	-	499	852	-	772	651	-	-	211
Implied Net Investment	-	-	-	-	478	-	467	1,448	2,402	2,006
Total Demand	**26,011**	**25,542**	**27,294**	**28,470**	**27,084**	**26,397**	**27,164**	**27,222**	**28,788**	**28,358**
Silver Price (London US$/oz)	4.897	5.544	5.220	4.951	4.370	4.599	4.879	6.658	7.312	11.549

World Silver Supply



Source: GFMS

World Silver Demand



Source: GFMS

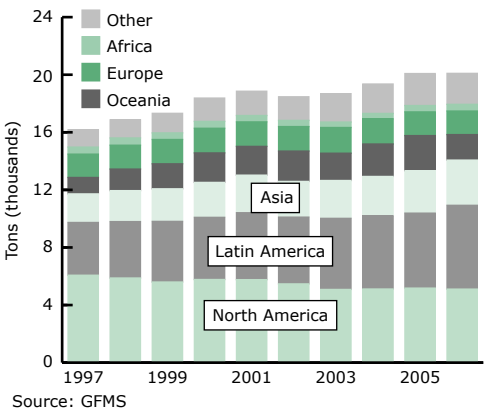
Table 2 - World Silver Mine Production (tons)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Poland	1,050	1,119	1,115	1,140	1,183	1,211	1,376	1,362	1,261	1,257
Sweden	265	268	275	294	275	293	307	291	284	266
Greece	36	45	40	31	62	75	4	0	2	25
Romania	43	39	39	34	38	32	29	28	27	23
Portugal	34	31	27	21	23	19	22	25	24	20
Bulgaria	31	25	21	18	24	25	22	19	20	15
Yugoslavia (former)	65	56	31	31	21	17	6	4	8	12
Czech & Slovak Republics	8	8	8	7	8	7	7	7	7	6
Spain	66	47	118	115	55	13	2	4	5	6
Ireland	13	11	10	17	9	8	9	7	6	4
France	2	1	1	1	1	1	0	1	1	1
Italy	4	4	4	2	2	2	2	0	0	0
Norway	4	4	0	0	0	0	0	0	0	0
Total Europe	**1,620**	**1,658**	**1,689**	**1,711**	**1,701**	**1,702**	**1,786**	**1,747**	**1,646**	**1,635**
North America										
Mexico	2,679	2,687	2,483	2,621	2,760	2,747	2,569	2,569	2,894	2,999
United States	2,180	2,060	1,950	1,980	1,740	1,350	1,240	1,250	1,220	1,140
Canada	1,213	1,131	1,166	1,174	1,265	1,373	1,276	1,295	1,063	969
Total North America	**6,072**	**5,879**	**5,600**	**5,775**	**5,765**	**5,470**	**5,085**	**5,114**	**5,178**	**5,108**
Latin America										
Peru	2,077	2,025	2,231	2,438	2,674	2,762	2,921	3,060	3,192	3,471
Chile	1,092	1,341	1,381	1,242	1,349	1,210	1,312	1,360	1,379	1,602
Bolivia	386	407	424	462	381	462	491	434	399	472
Argentina	34	69	102	102	176	126	138	145	156	190
Honduras	45	46	49	53	50	56	54	50	56	57
Brazil	7	10	7	7	7	7	7	8	9	10
Dominican Republic	12	7	3	0	0	0	0	0	0	0
Other Countries	11	12	14	15	13	13	16	16	15	18
Total Latin America	**3,664**	**3,917**	**4,212**	**4,318**	**4,649**	**4,637**	**4,938**	**5,073**	**5,206**	**5,820**
Asia										
China	1,267	1,358	1,494	1,596	1,729	1,646	1,828	1,967	2,083	2,345
Indonesia	250	311	271	312	374	332	297	266	308	240
Turkey	90	87	108	109	114	114	113	126	162	187
Iran	74	77	79	83	82	82	82	84	94	100
India	50	52	60	56	54	59	61	64	68	84
Papua New Guinea	49	58	59	73	69	64	63	54	49	51
Mongolia	31	33	33	32	37	35	34	37	38	38
North Korea	36	32	26	22	19	20	25	25	25	25
Philippines	20	19	18	23	34	9	10	9	19	24
Thailand	3	4	5	5	6	22	18	16	20	17
Japan	87	94	94	104	81	81	79	76	54	11
Saudi Arabia	16	14	11	9	10	10	17	15	14	10
Malaysia	10	7	3	0	0	0	0	0	0	0
Other Countries	2	6	4	2	2	5	3	5	6	9
Total Asia	**1,986**	**2,152**	**2,264**	**2,428**	**2,609**	**2,481**	**2,630**	**2,746**	**2,939**	**3,141**

Table 2 - World Silver Mine Production (tons)

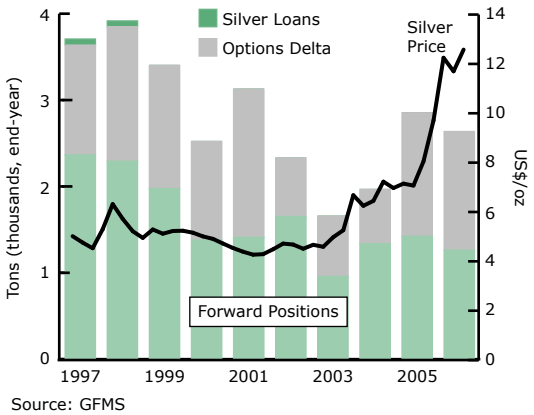
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Africa										
Morocco	260	306	278	289	283	263	193	209	231	237
South Africa	163	157	152	144	110	113	87	71	88	88
Dem. Rep. of the Congo	1	1	1	1	1	3	36	34	54	69
Namibia	39	13	0	17	19	20	29	27	30	35
Zambia	7	8	5	5	5	6	6	8	9	11
Zimbabwe	9	6	6	5	4	4	4	4	4	3
Other Countries	11	14	16	17	21	21	21	25	25	23
Total Africa	**489**	**505**	**458**	**477**	**443**	**429**	**378**	**377**	**442**	**465**
Oceania										
Australia	1,106	1,469	1,709	2,024	1,970	2,077	1,864	2,222	2,404	1,728
New Zealand	33	26	24	23	27	29	30	30	43	43
Fiji	2	2	2	1	2	2	1	2	1	1
Total Oceania	**1,141**	**1,496**	**1,736**	**2,048**	**1,999**	**2,108**	**1,895**	**2,254**	**2,448**	**1,772**
CIS										
Russia	649	605	617	628	650	699	1,070	1,233	1,315	1,232
Kazakhstan	440	527	642	890	940	849	802	703	805	811
Uzbekistan	77	82	64	62	53	49	53	60	61	70
Armenia	31	33	33	35	38	39	41	40	37	36
Tajikistan	3	3	3	4	4	4	4	4	3	3
Kyrgyzstan	1	1	1	1	1	1	1	1	1	1
Total CIS	**1,202**	**1,252**	**1,360**	**1,620**	**1,686**	**1,641**	**1,971**	**2,041**	**2,223**	**2,153**
World Total	**16,174**	**16,860**	**17,319**	**18,378**	**18,853**	**18,468**	**18,683**	**19,353**	**20,082**	**20,095**

World Silver Mine Production



Source: GFMS

Silver Producer Hedging: Outstanding Positions



Source: GFMS

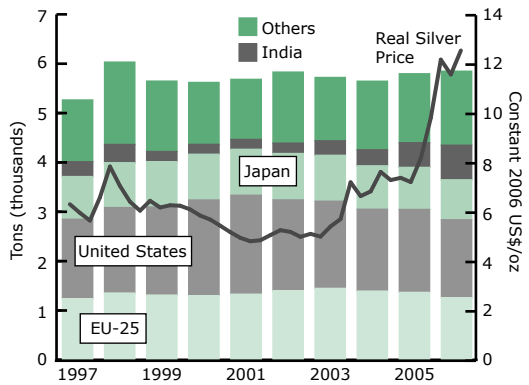
Table 3 - Supply of Silver from the Recycling of Old Scrap (tons)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Germany	500	510	500	520	523	520	592	568	546	424
UK & Ireland	261	337	358	338	346	423	404	386	360	340
Italy	105	145	105	105	110	113	112	104	133	160
France	133	127	124	110	122	120	126	118	127	139
Austria	56	57	52	50	62	58	48	50	40	40
Netherlands	40	40	40	45	42	44	44	45	42	40
Sweden	35	34	34	33	33	32	32	32	31	29
Belgium	20	20	20	20	21	20	20	20	20	20
Denmark	19	19	19	18	18	17	17	17	16	16
Czech & Slovak Republics	25	22	19	19	14	13	13	14	14	14
Spain	14	13	12	13	13	13	14	14	13	13
Portugal	14	14	14	14	13	14	14	14	13	13
Finland	15	15	15	13	13	12	13	12	12	11
Norway	30	25	29	33	21	21	14	10	9	9
Switzerland	24	14	10	10	10	10	10	10	10	8
Other Countries	37	36	36	35	34	36	34	34	32	31
Total Europe	**1,328**	**1,428**	**1,387**	**1,376**	**1,395**	**1,466**	**1,506**	**1,446**	**1,418**	**1,306**
North America										
United States	1,612	1,733	1,785	1,941	2,005	1,842	1,766	1,659	1,680	1,580
Mexico	134	330	71	48	44	48	55	60	64	72
Canada	50	60	50	45	45	44	47	44	46	44
Total North America	**1,796**	**2,123**	**1,906**	**2,034**	**2,094**	**1,934**	**1,868**	**1,763**	**1,790**	**1,696**
Latin America										
Brazil	50	50	55	48	50	32	36	32	32	32
Argentina	20	20	20	20	23	20	20	20	20	24
Chile	14	17	13	12	12	12	12	12	14	16
Other Countries	23	29	27	25	24	24	25	24	29	33
Total Latin America	**107**	**116**	**115**	**105**	**109**	**88**	**93**	**88**	**95**	**105**
Middle East										
Saudi Arabia	101	64	232	70	24	224	23	40	50	56
Turkey	50	53	43	40	39	44	52	53	52	50
Egypt	10	13	10	28	35	40	35	42	43	46
Oman	5	6	5	5	5	5	5	5	5	6
Other Countries	11	12	11	10	11	11	11	15	13	15
Total Middle East	**177**	**148**	**301**	**153**	**114**	**324**	**126**	**155**	**163**	**173**
Indian Sub-Continent										
India	300	370	207	200	200	210	294	324	500	700
Other Countries	10	15	11	13	15	15	15	15	16	17
Total Indian Sub-Cont.	**310**	**385**	**218**	**213**	**215**	**225**	**309**	**339**	**516**	**717**
East Asia										
Japan	865	908	917	927	931	940	930	880	852	810
China	143	180	182	187	192	196	206	240	270	324
South Korea	111	244	164	164	170	180	190	195	198	208
Thailand	25	30	24	20	21	28	30	32	31	35
Taiwan	24	26	28	28	28	27	30	31	32	34
Singapore	11	12	12	12	12	13	13	14	14	16
Hong Kong	11	15	11	11	11	12	12	13	13	14
Indonesia	11	12	13	15	13	10	10	11	11	12

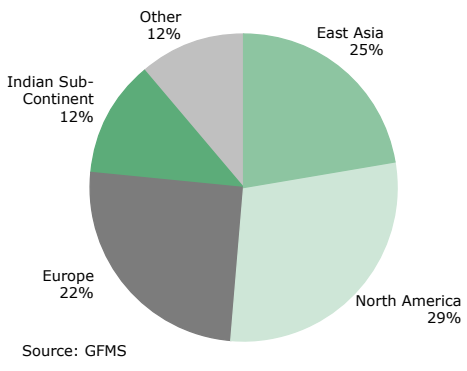
Table 3 - Supply of Silver from the Recycling of Old Scrap (tons) © GFMS / The Silver Institute

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Vietnam	12	12	12	11	10	9	10	10	11	11
Philippines	6	7	7	7	6	6	6	6	6	6
Malaysia	3	4	3	3	3	4	4	4	4	4
Total East Asia	**1,223**	**1,450**	**1,372**	**1,384**	**1,398**	**1,425**	**1,441**	**1,436**	**1,443**	**1,476**
Africa										
Morocco	16	17	16	16	16	16	16	40	19	29
Other Countries	17	17	17	18	17	17	17	17	17	18
Total Africa	**33**	**34**	**33**	**34**	**33**	**33**	**33**	**57**	**36**	**47**
Oceania										
Australia	71	74	75	76	74	73	65	64	55	53
Total Oceania	**71**	**74**	**75**	**76**	**74**	**73**	**65**	**64**	**55**	**53**
CIS										
CIS	220	275	240	245	252	263	280	297	280	276
Total CIS	**220**	**275**	**240**	**245**	**252**	**263**	**280**	**297**	**280**	**276**
World Total	**5,265**	**6,032**	**5,647**	**5,621**	**5,684**	**5,830**	**5,721**	**5,646**	**5,797**	**5,848**

World Silver Scrap Supply



World Scrap Supply, 2006



Source: GFMS

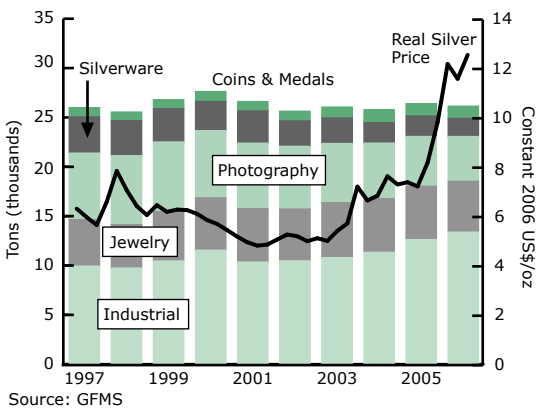
Table 4 - World Silver Fabrication Including the Use of Scrap (tons)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Italy	1,757	1,750	1,938	2,048	1,844	1,760	1,707	1,690	1,542	1,411
Germany	1,475	1,490	1,301	1,256	1,237	1,102	1,216	1,257	1,260	1,271
UK & Ireland	1,065	1,119	1,147	1,215	1,320	1,241	1,260	1,508	1,332	1,119
Belgium	847	1,052	1,167	1,098	999	958	910	858	814	894
France	892	892	837	910	909	862	819	404	389	395
Spain	271	275	234	210	171	161	148	198	175	155
Poland	104	111	117	120	107	100	120	134	145	149
Switzerland	298	332	344	281	108	106	94	96	101	97
Greece	140	126	126	104	94	87	90	90	90	86
Netherlands	74	70	88	60	57	64	60	79	69	63
Norway	46	47	94	89	71	60	60	65	56	54
Portugal	89	96	100	107	80	53	82	127	54	45
Austria	42	42	38	33	34	37	37	40	40	38
Sweden	52	43	42	41	31	33	37	38	38	37
Denmark	35	32	31	32	28	24	22	21	21	21
Czech & Slovak Republics	24	28	24	25	31	21	22	21	20	20
Finland	29	21	21	17	14	14	13	12	12	13
Romania	11	16	13	13	12	12	12	12	12	12
Hungary	14	13	14	15	13	13	13	13	12	12
Cyprus & Malta	12	11	12	12	10	10	9	9	9	9
Yugoslavia (former)	5	5	5	5	7	7	7	8	8	9
Other Countries	4	6	5	5	4	4	4	5	5	5
Total Europe	**7,287**	**7,575**	**7,697**	**7,694**	**7,178**	**6,729**	**6,744**	**6,684**	**6,204**	**5,913**
North America										
United States	4,892	5,277	5,783	5,977	5,275	5,505	5,454	5,608	5,891	5,778
Mexico	732	682	675	537	530	564	629	682	693	584
Canada	99	118	121	104	90	96	78	109	126	184
Total North America	**5,723**	**6,077**	**6,579**	**6,618**	**5,895**	**6,164**	**6,160**	**6,400**	**6,710**	**6,546**
Latin America										
Brazil	260	253	238	210	204	198	204	227	232	140
Argentina	118	108	93	73	56	58	74	78	80	60
Peru	35	34	32	30	32	32	23	21	19	22
Colombia	33	33	27	24	22	22	22	22	21	21
Chile	15	15	14	13	13	13	13	13	13	13
Ecuador	21	21	17	17	14	14	12	12	10	12
Other Countries	41	50	56	35	27	23	27	34	38	42
Total Latin America	**523**	**514**	**477**	**402**	**368**	**360**	**376**	**408**	**414**	**310**
Middle East										
Turkey	215	204	187	230	200	254	295	326	315	267
Israel	101	97	97	91	83	83	81	83	85	85
Egypt	65	58	63	64	55	49	57	62	55	52
Iran	49	42	43	45	48	43	45	47	50	49
Other Countries	54	54	56	60	57	56	56	59	61	62
Total Middle East	**484**	**455**	**445**	**490**	**442**	**486**	**534**	**577**	**567**	**514**
Indian Sub-Continent										
India	3,624	3,317	3,479	3,560	4,339	3,309	3,310	2,163	2,850	2,575
Bangladesh & Nepal	200	160	178	187	185	150	140	132	116	97
Other Countries	108	87	105	98	67	66	66	71	73	74
Total Indian Sub-Cont.	**3,932**	**3,564**	**3,762**	**3,845**	**4,591**	**3,525**	**3,516**	**2,366**	**3,039**	**2,746**

Table 4 - World Silver Fabrication Including the Use of Scrap (tons)

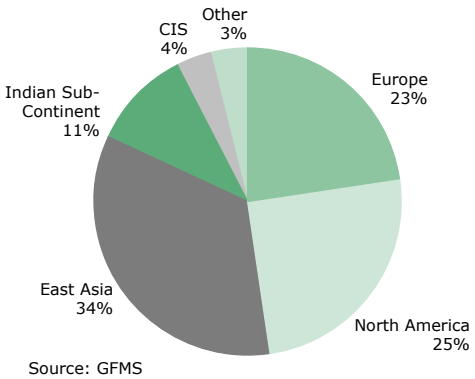
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
East Asia										
Japan	3,955	3,508	3,809	4,200	3,711	3,693	3,604	3,893	3,928	4,264
China	1,021	1,059	1,049	1,122	1,238	1,479	1,641	1,835	1,917	2,102
Thailand	877	876	962	962	1,022	1,014	1,138	1,151	1,150	1,150
South Korea	579	429	519	611	531	555	596	617	628	651
Taiwan	214	210	210	293	263	279	319	351	364	397
Indonesia	126	96	113	132	161	139	146	181	159	178
Hong Kong	138	112	120	138	100	105	99	107	110	118
Vietnam	22	19	22	22	23	26	28	30	32	35
Myanmar, Laos & Cambodia	30	25	28	26	28	30	32	28	28	26
Malaysia	13	12	15	18	18	20	21	22	21	20
Other Countries	10	11	12	13	14	14	15	14	15	14
Total East Asia	**6,984**	**6,357**	**6,861**	**7,536**	**7,110**	**7,353**	**7,638**	**8,228**	**8,350**	**8,956**
Africa										
Morocco	20	18	17	18	19	18	18	19	19	19
Tunisia	10	10	10	10	10	10	11	11	11	10
South Africa	8	8	8	8	7	7	8	8	8	8
Algeria	7	6	6	6	6	5	6	6	6	6
Libya	4	4	4	4	4	4	4	4	4	4
Other Countries	8	8	8	8	8	8	8	9	9	9
Total Africa	**56**	**53**	**53**	**54**	**53**	**52**	**54**	**57**	**58**	**57**
Oceania										
Australia	161	176	180	218	184	180	193	178	121	133
New Zealand	1	1	1	1	1	1	1	1	1	1
Total Oceania	**161**	**176**	**181**	**219**	**186**	**181**	**195**	**179**	**122**	**134**
CIS										
CIS	838	770	741	760	784	775	830	875	923	964
Total CIS	**838**	**770**	**741**	**760**	**784**	**775**	**830**	**875**	**923**	**964**
World Total	**25,989**	**25,542**	**26,795**	**27,618**	**26,607**	**25,625**	**26,046**	**25,774**	**26,386**	**26,142**

World Silver Fabrication



Source: GFMS

World Silver Fabrication, 2006



Source: GFMS

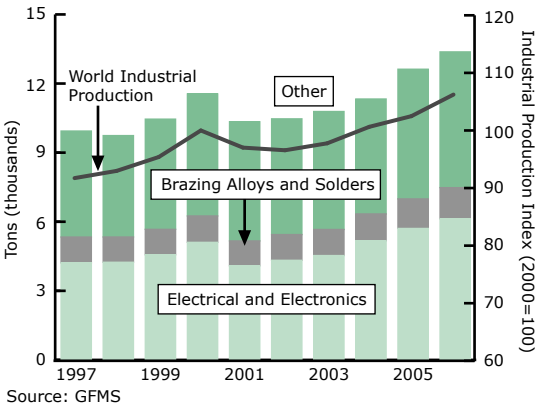
Table 5 - Silver Fabrication: Industrial Applications Including the Use of Scrap (tons)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Germany	555	571	571	647	665	659	675	730	744	794
UK & Ireland	349	406	378	420	358	351	374	388	387	441
Italy	354	329	331	340	324	324	317	357	336	337
France	418	349	362	384	496	455	430	320	317	321
Switzerland	269	311	322	259	85	84	72	76	81	77
Spain	91	95	83	62	40	40	38	65	60	58
Netherlands	52	52	52	52	48	48	47	48	49	49
Poland	23	23	23	23	22	21	21	22	22	23
Austria	18	17	17	17	17	17	17	17	17	17
Norway	12	11	45	37	23	20	19	26	22	17
Sweden	11	11	11	11	10	10	10	10	10	10
Czech & Slovak Republics	13	13	16	8	11	9	9	8	8	9
Belgium	10	10	10	10	8	8	8	8	8	8
Other Countries	23	24	23	23	21	21	22	22	22	23
Total Europe	**2,197**	**2,221**	**2,244**	**2,293**	**2,127**	**2,065**	**2,057**	**2,097**	**2,084**	**2,184**
North America										
United States	2,343	2,520	2,757	2,958	2,449	2,584	2,699	2,931	3,134	3,323
Mexico	85	92	103	107	94	93	96	93	101	95
Canada	20	17	17	17	16	16	16	19	31	59
Total North America	**2,448**	**2,629**	**2,877**	**3,082**	**2,559**	**2,693**	**2,811**	**3,043**	**3,266**	**3,477**
Latin America										
Brazil	105	108	98	98	98	98	94	115	139	86
Argentina	36	36	30	25	20	20	20	20	28	32
Colombia	9	9	7	6	6	6	6	6	5	5
Ecuador	2	2	2	2	2	2	2	2	2	2
Other Countries	12	12	12	12	13	13	12	12	12	12
Total Latin America	**164**	**167**	**149**	**143**	**139**	**139**	**134**	**155**	**186**	**137**
Middle East										
Turkey	43	41	38	44	35	39	46	51	53	56
Israel	31	31	30	30	26	24	24	24	25	26
Egypt	3	4	4	4	4	3	3	3	3	3
Other Countries	4	4	4	4	4	4	4	4	4	4
Total Middle East	**81**	**79**	**75**	**82**	**68**	**70**	**76**	**82**	**86**	**89**
Indian Sub-Continent										
India	1,120	992	1,180	1,435	1,579	1,381	1,382	1,053	1,670	1,687
Pakistan	22	15	18	16	10	8	8	9	9	10
Total Indian Sub-Cont.	**1,142**	**1,007**	**1,198**	**1,451**	**1,589**	**1,389**	**1,390**	**1,062**	**1,679**	**1,697**
East Asia										
Japan	1,848	1,643	1,890	2,244	1,723	1,839	1,876	2,292	2,628	2,893
China	632	645	651	681	693	795	859	936	990	1,093
South Korea	382	349	379	459	387	416	452	472	481	503
Taiwan	197	193	196	274	250	270	309	339	351	381
Hong Kong	107	93	101	121	85	93	90	97	99	107
Indonesia	15	16	16	16	14	15	17	19	19	19
Total East Asia	**3,181**	**2,939**	**3,233**	**3,795**	**3,152**	**3,427**	**3,603**	**4,154**	**4,568**	**4,996**

Table 5 - Silver Fabrication: Industrial Applications Including the Use of Scrap (tons)

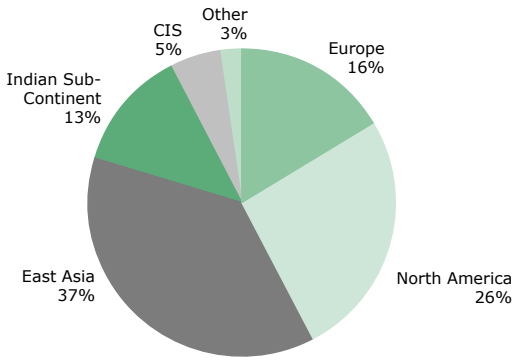
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Africa										
Morocco	7	7	7	8	8	8	8	8	8	9
South Africa	5	5	5	5	4	4	4	4	4	4
Other Countries	5	5	5	5	5	5	5	6	6	6
Total Africa	**17**	**17**	**17**	**18**	**17**	**17**	**17**	**18**	**19**	**19**
Oceania										
Australia	66	72	76	77	65	66	68	69	63	65
Total Oceania	**66**	**72**	**76**	**77**	**65**	**66**	**68**	**69**	**63**	**65**
CIS										
CIS	642	610	586	609	624	600	630	650	672	712
Total CIS	**642**	**610**	**586**	**609**	**624**	**600**	**630**	**650**	**672**	**712**
World Total	**9,938**	**9,741**	**10,455**	**11,549**	**10,340**	**10,467**	**10,786**	**11,329**	**12,622**	**13,375**

Components of Industrial Demand



Source: GFMS

World Silver Industrial Fabrication, 2006



Source: GFMS

Table 5a - Silver Fabrication: Electrical and Electronics Including the Use of Scrap (tons)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
United States	1,303	1,373	1,464	1,603	1,062	1,168	1,228	1,474	1,622	1,710
Japan	804	738	933	1,140	828	913	940	1,181	1,360	1,512
Germany	370	380	380	445	488	484	503	551	569	613
China	316	305	308	320	320	340	368	397	420	474
Taiwan	146	148	150	216	203	223	260	287	298	324
India	130	130	140	150	145	151	159	167	300	312
South Korea	201	188	206	255	224	236	260	275	280	296
France	238	207	210	228	342	309	297	252	248	252
UK & Ireland	160	185	157	186	135	144	152	158	169	219
Italy	100	90	92	95	86	87	90	118	108	112
Hong Kong	85	77	90	110	77	87	85	92	94	101
Mexico	36	40	60	64	56	56	58	56	64	61
Turkey	31	28	24	28	22	25	30	33	34	36
Brazil	45	45	40	40	40	40	38	52	66	27
Australia	15	17	18	19	18	20	21	21	22	23
Netherlands	18	18	18	18	16	16	16	16	17	17
Switzerland	172	228	232	165	12	12	14	14	13	13
Spain	29	30	30	9	0	0	0	10	10	10
Austria	7	7	7	7	7	7	7	7	7	7
Romania	3	4	4	4	4	4	4	4	4	4
Egypt	3	4	4	4	4	3	3	3	3	3
World Total	**4,212**	**4,241**	**4,567**	**5,106**	**4,088**	**4,326**	**4,532**	**5,170**	**5,709**	**6,127**

Table 5b - Silver Fabrication: Brazing Alloys and Solders Including the Use of Scrap (tons)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
China	179	196	198	208	215	247	270	301	320	351
United States	260	269	280	272	258	260	247	228	240	224
India	50	47	50	55	57	60	64	67	130	134
Japan	155	130	131	137	109	104	104	116	120	127
Germany	95	97	94	101	88	95	97	100	98	105
Italy	59	54	62	65	63	64	63	64	65	72
Canada	13	10	10	10	9	9	9	12	24	52
South Korea	35	25	26	31	38	42	44	45	47	48
Switzerland	52	49	48	50	41	40	42	42	48	44
UK & Ireland	33	34	31	33	38	33	37	40	41	42
Taiwan	34	31	32	37	29	31	33	35	36	39
Brazil	25	25	23	23	23	23	22	23	25	26
France	43	32	29	33	32	32	25	22	25	26
Spain	29	32	33	33	30	30	28	25	20	20
Australia	20	22	23	24	20	19	20	20	16	17
Mexico	28	30	20	20	17	16	17	16	16	15
Netherlands	8	8	8	8	7	7	7	8	7	7
Austria	3	3	3	3	3	3	3	3	3	3
Israel	3	3	3	3	2	2	2	2	2	2
World Total	**1,124**	**1,097**	**1,103**	**1,145**	**1,079**	**1,117**	**1,132**	**1,169**	**1,283**	**1,353**

Table 6 - Silver Fabrication: Photographic Use Including the Use of Scrap (tons)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
EU-25	2,282	2,400	2,396	2,254	2,226	2,081	2,023	1,916	1,700	1,514
Other Countries	5	8	6	6	5	5	5	5	5	5
Total Europe	**2,287**	**2,408**	**2,402**	**2,260**	**2,231**	**2,086**	**2,028**	**1,921**	**1,705**	**1,519**
North America										
United States	1,955	2,147	2,285	2,185	2,037	2,017	1,832	1,716	1,753	1,442
Mexico	127	107	91	0	0	0	0	0	0	0
Total North America	**2,082**	**2,254**	**2,376**	**2,185**	**2,037**	**2,017**	**1,832**	**1,716**	**1,753**	**1,442**
Latin America										
Argentina	56	56	49	40	32	34	48	48	40	16
Brazil	105	100	100	76	70	64	68	68	43	0
Total Latin America	**161**	**156**	**149**	**116**	**102**	**98**	**116**	**116**	**83**	**16**
Indian Sub-Continent										
India	20	10	10	10	10	10	10	10	10	10
Sri Lanka	10	12	12	12	4	4	4	4	4	4
Total Indian Sub-Cont.	**30**	**22**	**22**	**22**	**14**	**14**	**14**	**14**	**14**	**14**
East Asia										
Japan	1,822	1,810	1,864	1,902	1,935	1,799	1,677	1,543	1,234	1,308
China	187	190	114	120	140	176	180	190	167	157
Other Countries	1	1	1	0	0	0	0	0	0	0
Total East Asia	**2,010**	**2,001**	**1,979**	**2,022**	**2,075**	**1,975**	**1,857**	**1,733**	**1,401**	**1,465**
Oceania										
Australia	51	51	52	85	74	71	64	47	4	4
Total Oceania	***51***	***51***	***52***	***85***	***74***	***71***	***64***	***47***	***4***	***4***
CIS										
CIS	140	119	107	100	95	92	88	83	80	76
Total CIS	**140**	**119**	**107**	**100**	**95**	**92**	**88**	**83**	**80**	**76**
World Total	**6,761**	**7,011**	**7,087**	**6,790**	**6,628**	**6,353**	**5,999**	**5,629**	**5,040**	**4,535**

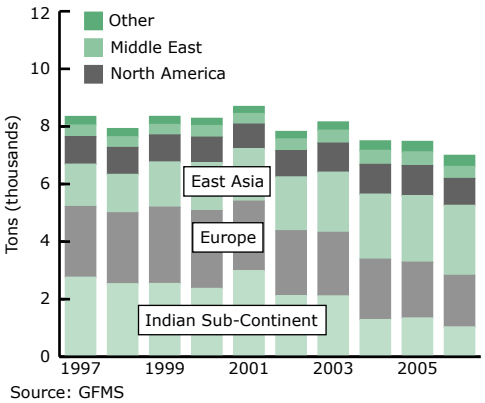
Table 7 - Silver Fabrication: Jewelry and Silverware Including the Use of Scrap (tons)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Italy	1,392	1,410	1,598	1,700	1,512	1,432	1,380	1,317	1,195	1,064
Germany	304	300	304	284	271	245	240	226	213	209
Poland	71	83	89	92	78	71	91	95	105	111
Greece	140	126	126	104	94	87	90	90	90	86
France	69	81	85	88	85	84	81	69	55	57
Spain	124	126	105	93	76	74	76	63	61	51
UK & Ireland	105	102	98	100	90	68	50	48	43	41
Portugal	59	60	66	66	55	49	52	48	42	38
Norway	33	35	47	51	46	40	42	37	32	34
Sweden	40	31	30	29	20	22	26	27	27	26
Denmark	32	29	28	29	25	21	19	18	18	18
Switzerland	9	12	10	10	10	10	10	10	10	10
Finland	26	18	18	14	11	11	10	9	9	10
Cyprus & Malta	12	11	12	12	10	10	9	9	9	9
Austria	13	15	11	8	7	7	7	7	5	4
Other Countries	26	25	24	23	23	23	22	23	22	23
Total Europe	**2,456**	**2,464**	**2,651**	**2,703**	**2,414**	**2,254**	**2,206**	**2,097**	**1,937**	**1,790**
North America										
United States	391	391	408	416	405	428	471	479	487	465
Mexico	508	477	470	410	401	437	486	504	511	431
Canada	59	67	60	57	47	48	52	50	44	36
Total North America	**958**	**935**	**938**	**883**	**853**	**913**	**1,009**	**1,033**	**1,042**	**932**
Latin America										
Brazil	50	45	40	36	36	36	42	44	50	54
Peru	33	32	30	28	29	29	20	18	16	19
Colombia	24	24	20	18	16	16	16	16	16	16
Argentina	26	16	14	8	4	4	6	10	12	12
Ecuador	19	19	15	15	12	12	10	10	8	10
Other Countries	45	54	59	37	29	25	30	37	41	45
Total Latin America	**197**	**190**	**178**	**142**	**126**	**122**	**124**	**135**	**143**	**156**
Middle East										
Turkey	171	163	147	186	164	211	245	272	258	207
Israel	68	64	66	59	55	57	56	57	58	58
Egypt	62	54	58	60	51	46	53	58	52	48
Saudi Arabia & Yemen	20	16	18	20	18	18	18	19	21	21
Other Countries	80	76	77	81	83	77	79	83	86	86
Total Middle East	**401**	**373**	**366**	**405**	**371**	**410**	**452**	**489**	**476**	**420**
Indian Sub-Continent										
India	2,484	2,315	2,289	2,115	2,750	1,918	1,918	1,100	1,170	878
Bangladesh & Nepal	200	160	178	187	185	150	140	132	116	97
Other Countries	76	60	75	70	53	54	54	58	60	60
Total Indian Sub-Cont.	**2,760**	**2,535**	**2,542**	**2,372**	**2,988**	**2,122**	**2,112**	**1,290**	**1,346**	**1,035**
East Asia										
Thailand	869	869	958	957	1,017	1,004	1,127	1,147	1,145	1,146
China	114	149	214	283	358	443	530	637	702	802
Indonesia	111	80	97	116	147	124	129	162	140	159
South Korea	197	80	140	152	144	139	144	145	147	149

Table 7 - Silver Fabrication: Jewelry and Silverware Including the Use of Scrap (tons)

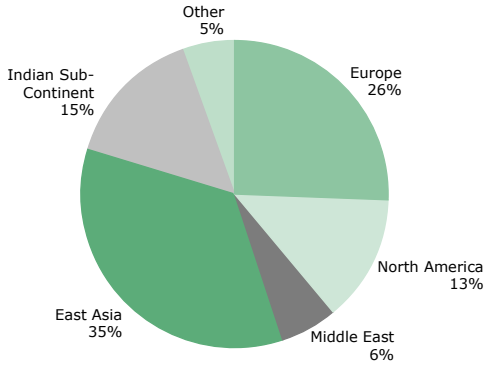
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Japan	60	55	55	54	53	52	49	56	64	61
Vietnam	22	19	22	22	23	26	28	30	32	35
Myanmar, Laos & Cambodia	30	25	28	26	28	30	32	28	28	26
Malaysia	13	12	15	17	18	20	21	22	21	20
Taiwan	16	16	13	13	10	9	10	12	13	12
Hong Kong	31	19	19	17	15	12	10	10	10	11
Other Countries	9	9	9	10	11	11	11	11	11	11
Total East Asia	**1,471**	**1,333**	**1,571**	**1,667**	**1,823**	**1,869**	**2,091**	**2,260**	**2,313**	**2,432**
Africa										
Morocco	13	11	10	10	11	11	10	11	11	11
Tunisia	9	9	9	9	9	9	10	10	10	9
Algeria	6	5	5	5	5	4	5	5	5	5
Other Countries	11	11	11	12	11	11	12	13	13	13
Total Africa	**39**	**36**	**35**	**36**	**36**	**35**	**37**	**39**	**39**	**37**
Oceania										
Australia	18	22	23	24	22	23	22	23	22	21
New Zealand	0	1	1	1	1	1	1	1	1	1
Total Oceania	**18**	**23**	**24**	**25**	**23**	**24**	**23**	**24**	**23**	**22**
CIS										
CIS	44	34	41	47	58	74	100	132	158	169
Total CIS	**44**	**34**	**41**	**47**	**58**	**74**	**100**	**132**	**158**	**169**
World Total	**8,344**	**7,924**	**8,346**	**8,280**	**8,691**	**7,823**	**8,154**	**7,497**	**7,478**	**6,994**

World Jewelry & Silverware Fabrication



Source: GFMS

World Jewelry & Silverware Fabrication, 2006



Source: GFMS

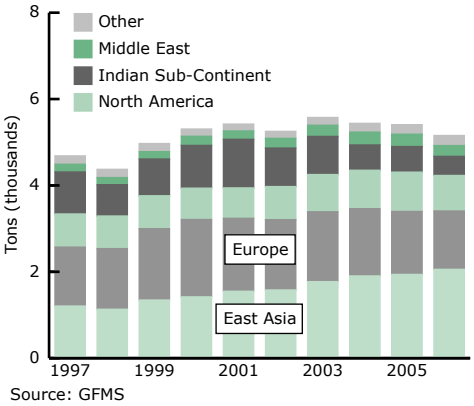
Table 7a - Silver Fabrication: Jewelry Including the Use of Scrap (tons)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Italy	800	830	1,058	1,210	1,157	1,142	1,110	1,065	980	876
Germany	109	108	126	112	114	104	113	116	118	119
Poland	68	80	86	89	75	68	88	92	102	108
France	63	74	78	80	77	76	74	62	48	50
Spain	56	54	45	45	42	46	52	42	44	40
Portugal	53	54	59	59	49	44	47	43	37	34
Greece	40	36	36	32	30	28	30	32	34	33
UK & Ireland	90	88	85	87	77	56	38	36	32	30
Sweden	18	14	14	13	9	10	12	12	12	12
Denmark	14	13	12	13	11	10	9	8	8	8
Switzerland	6	9	7	7	7	7	7	7	7	7
Cyprus & Malta	8	8	9	8	7	7	6	7	7	7
Norway	5	5	7	8	7	6	6	6	5	5
Finland	8	6	5	4	3	3	3	3	3	3
Austria	3	4	4	4	3	3	3	3	2	1
Other Countries	22	21	21	20	20	20	19	20	19	20
Total Europe	**1,364**	**1,404**	**1,652**	**1,791**	**1,690**	**1,629**	**1,617**	**1,554**	**1,458**	**1,351**
North America										
United States	312	316	336	348	340	368	416	428	440	420
Mexico	406	382	376	328	325	358	403	423	434	372
Canada	50	57	51	49	39	40	44	42	36	30
Total North America	**768**	**755**	**763**	**725**	**704**	**766**	**863**	**893**	**910**	**822**
Latin America										
Brazil	45	40	36	32	32	32	38	40	45	48
Peru	12	12	12	12	13	13	10	9	8	11
Argentina	13	10	8	5	3	3	4	7	7	8
Colombia	8	8	6	6	6	6	6	6	6	6
Ecuador	10	10	8	8	7	7	6	6	5	6
Other Countries	36	45	51	29	22	17	23	29	34	37
Total Latin America	**124**	**125**	**121**	**93**	**83**	**78**	**87**	**97**	**105**	**116**
Middle East										
Turkey	70	66	59	101	92	129	154	185	176	141
Egypt	49	43	46	47	40	36	44	48	43	41
Saudi Arabia	15	12	14	16	15	15	15	16	17	18
Israel	16	15	15	14	13	13	13	13	14	13
Other Countries	30	32	32	34	34	33	33	34	36	37
Total Middle East	**180**	**168**	**167**	**212**	**193**	**226**	**258**	**296**	**286**	**249**
Indian Sub-Continent										
India	860	650	758	885	1,032	804	800	500	510	369
Bangladesh & Nepal	69	45	59	74	69	63	58	60	56	47
Other Countries	43	27	34	32	24	24	24	26	27	27
Total Indian Sub-Cont.	**972**	**722**	**851**	**990**	**1,125**	**891**	**883**	**586**	**593**	**443**
East Asia										
Thailand	745	760	850	845	896	884	999	1,011	1,005	1,012
China	86	115	165	218	275	341	408	486	540	627
Indonesia	93	69	84	99	128	103	108	139	117	137
South Korea	138	64	115	126	118	117	121	123	122	126
Japan	56	52	53	52	51	50	48	55	63	60

Table 7a - Silver Fabrication: Jewelry Including the Use of Scrap (tons)

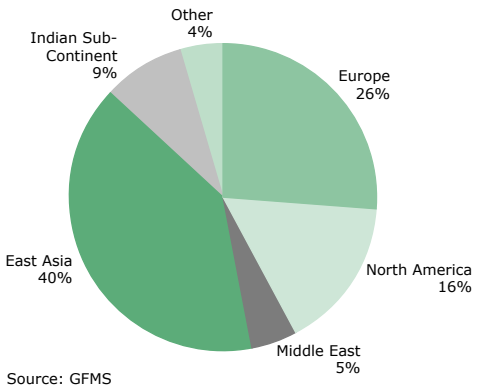
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Vietnam	20	17	20	20	21	24	26	27	29	33
Myanmar, Laos & Cambodia	20	17	19	18	20	21	23	20	20	19
Malaysia	12	11	14	16	17	18	19	20	19	19
Taiwan	9	10	8	8	6	6	7	8	9	9
Hong Kong	22	12	12	11	10	8	7	7	7	8
Other Countries	6	6	6	7	8	8	8	8	8	8
Total East Asia	**1,207**	**1,133**	**1,346**	**1,420**	**1,549**	**1,579**	**1,772**	**1,905**	**1,939**	**2,057**
Africa										
Morocco	11	9	8	8	9	8	8	8	8	8
Tunisia	6	6	6	7	6	6	7	7	7	6
Algeria	4	4	4	4	3	3	3	4	4	3
Other Countries	9	9	9	9	9	9	10	10	10	10
Total Africa	**30**	**27**	**27**	**28**	**27**	**27**	**28**	**29**	**29**	**28**
Oceania										
Australia	17	21	22	23	21	22	21	21	21	20
Other Countries	0	1	1	1	1	1	1	1	1	1
Total Oceania	**17**	**21**	**22**	**24**	**22**	**23**	**22**	**22**	**22**	**21**
CIS										
Russia	9	7	9	10	14	19	28	38	47	51
Other Countries	13	10	13	13	14	15	16	16	17	17
Total CIS	**23**	**18**	**21**	**23**	**28**	**34**	**43**	**55**	**64**	**68**
World Total	**4,685**	**4,373**	**4,970**	**5,306**	**5,420**	**5,252**	**5,573**	**5,437**	**5,406**	**5,156**

World Jewelry Fabrication



Source: GFMS

World Jewelry Fabrication, 2006

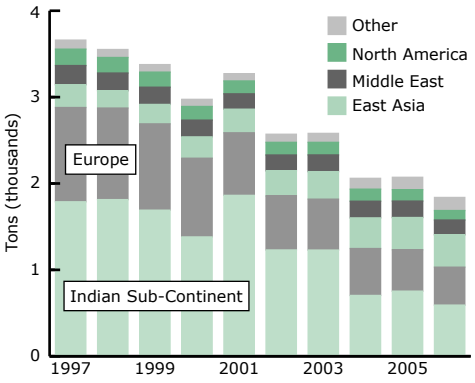


Source: GFMS

Table 7b - Silver Fabrication: Silverware Including the Use of Scrap (tons)

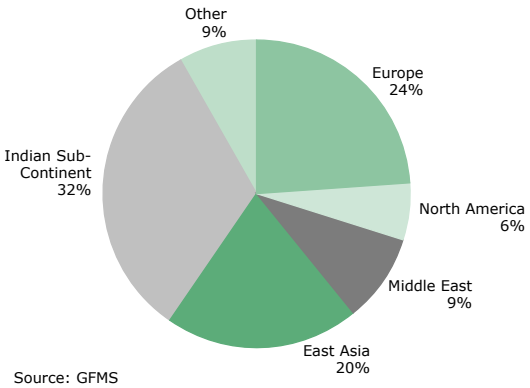
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Europe										
Italy	592	580	540	490	355	290	270	252	215	188
Germany	195	192	178	172	157	142	128	110	95	90
Greece	100	90	90	72	64	59	60	58	56	53
Norway	28	30	40	44	39	34	35	31	27	29
Sweden	22	17	17	16	11	12	14	15	15	14
Spain	68	72	60	48	34	28	24	21	17	11
Other Countries	86	79	75	70	64	61	58	56	54	54
Total Europe	**1,091**	**1,060**	**999**	**911**	**724**	**625**	**589**	**543**	**479**	**439**
North America										
Mexico	102	95	94	82	76	79	83	81	77	59
United States	79	75	72	68	65	60	55	51	47	45
Canada	9	10	9	8	8	8	8	8	8	6
Total North America	**190**	**180**	**175**	**158**	**149**	**147**	**146**	**140**	**132**	**110**
Latin America										
Colombia	16	16	14	12	10	10	10	10	10	10
Peru	21	20	18	16	16	16	10	9	8	8
Other Countries	36	30	25	21	17	17	17	19	21	22
Total Latin America	**73**	**66**	**57**	**49**	**43**	**43**	**37**	**38**	**39**	**40**
Middle East										
Turkey	101	97	87	85	72	83	91	87	82	66
Israel	52	50	51	46	42	44	43	44	45	45
Egypt	13	11	12	13	11	10	10	10	9	8
Other Countries	55	47	49	51	53	48	50	52	54	53
Total Middle East	**221**	**205**	**199**	**194**	**178**	**184**	**193**	**193**	**190**	**171**
Indian Sub-Continent										
India	1,624	1,665	1,531	1,230	1,718	1,114	1,118	600	660	509
Bangladesh & Nepal	131	115	119	113	116	87	82	72	60	50
Other Countries	34	33	41	39	29	30	30	32	33	33
Total Indian Sub-Cont.	**1,788**	**1,813**	**1,691**	**1,381**	**1,863**	**1,231**	**1,229**	**704**	**753**	**592**
East Asia										
China	28	34	49	65	83	102	122	151	162	175
Thailand	124	109	108	112	121	121	129	136	140	134
South Korea	59	16	25	26	26	22	23	22	25	23
Indonesia	18	11	13	17	19	21	21	23	23	21
Other Countries	36	30	29	27	26	24	24	23	24	22
Total East Asia	**264**	**200**	**225**	**247**	**273**	**290**	**319**	**355**	**374**	**375**
Africa										
Africa	9	8	9	9	9	9	9	9	9	9
Total Africa	**9**	**8**	**9**	**9**	**9**	**9**	**9**	**9**	**9**	**9**
Oceania										
Oceania	1	2	2	2	1	1	1	1	1	1
Total Oceania	**1**	**2**	**2**	**2**	**1**	**1**	**1**	**1**	**1**	**1**
CIS										
Russia	17	13	16	19	25	35	51	71	88	95
Other Countries	5	4	4	5	5	5	5	6	6	6
Total CIS	**22**	**17**	**20**	**23**	**30**	**40**	**57**	**77**	**94**	**101**
World Total	**3,660**	**3,551**	**3,376**	**2,974**	**3,271**	**2,570**	**2,580**	**2,060**	**2,072**	**1,838**

World Silverware Fabrication



Source: GFMS

World Silverware Fabrication, 2006



Source: GFMS

Table 8 - Silver Fabrication: Coins and Medals Including the Use of Scrap (tons)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
United States	203	219	333	418	384	476	452	483	517	548
Germany	166	312	218	273	251	187	301	301	303	268
Canada	20	34	44	30	27	32	10	40	51	89
Mexico	12	6	11	20	35	34	47	85	81	58
China	88	75	71	38	47	65	72	72	57	50
Spain	56	54	46	55	55	47	34	70	54	46
Australia	26	31	29	31	23	20	40	40	32	43
France	10	10	10	11	13	16	17	15	17	17
Austria	11	10	10	8	10	13	13	15	18	17
Poland	3	5	5	5	7	8	8	17	18	15
UK & Ireland	19	19	19	17	14	16	15	14	14	14
Switzerland	20	9	12	12	13	12	12	10	10	10
Russia	12	6	7	4	7	9	12	11	12	8
Portugal	25	31	29	36	21	0	26	75	9	5
Other Countries	275	46	63	42	40	48	49	70	54	50
World Total	**945**	**866**	**907**	**999**	**948**	**983**	**1,108**	**1,318**	**1,245**	**1,237**

Appendix 2

Silver Prices, 1986 - 2006 (The Effects of Exchange Rates and Inflation)

1. Actual Prices* (money of the day)

	London US$/oz	India* Rupee/kg	Thailand Baht/oz	Japan Yen/10g	Korea Won/10g	China Yuan/kg	Eurozone** Euro/kg	Mexico Peso/oz
1986	5.465	4,105	143.71	296	1,549	607	195	3.34
1987	7.016	5,124	180.46	326	1,855	840	208	9.67
1988	6.532	6,231	165.23	269	1,536	782	189	14.85
1989	5.500	6,803	141.36	244	1,187	666	170	13.54
1990	4.832	6,779	123.62	225	1,099	743	129	13.59
1991	4.057	6,993	103.51	176	956	694	111	12.24
1992	3.946	7,580	100.24	161	991	700	101	12.21
1993	4.313	6,163	109.20	154	1,113	799	117	13.44
1994	5.285	6,846	132.92	174	1,365	1,465	141	17.84
1995	5.197	6,864	129.49	157	1,289	1,395	122	33.36
1996	5.199	7,291	131.77	182	1,345	1,390	128	39.51
1997	4.897	7,009	153.60	191	1,498	1,305	139	38.78
1998	5.544	8,016	229.30	233	2,498	1,476	160	50.65
1999	5.220	8,022	197.38	191	1,995	1,389	158	49.90
2000	4.951	8,002	198.61	172	1,800	1,318	173	46.82
2001	4.370	7,420	194.15	171	1,814	1,163	157	40.82
2002	4.599	7,934	197.57	185	1,850	1,224	156	44.41
2003	4.879	8,138	202.39	182	1,869	1,298	138	52.64
2004	6.658	10,606	267.79	232	2,452	1,772	172	75.14
2005	7.312	11,083	294.07	259	2,407	1,926	189	79.68
2006	11.549	17,843	437.51	432	3,545	2,958	296	125.88

* Prices are calculated from the London price and the average exchange rate for the year.
In the case of India, the price shown is the one actually quoted in the Mumbai market.
** From 1986-1998, the DM/kg price is expressed in Euro/kg at the official conversion rate of 1.95583

2. Real Prices* (Constant 2006 money)**

	London US$/oz	India* Rupee/kg	Thailand Baht/oz	Japan Yen/10g	Korea Won/10g	China Yuan/kg	Eurozone** Euro/kg	Mexico Peso/oz
1986	10.051	17,285	310.86	335	3,880	N/a	286	179.05
1987	12.439	19,832	380.83	369	4,511	N/a	303	223.37
1988	11.136	21,947	335.91	302	3,486	N/a	273	160.18
1989	8.944	22,571	272.76	268	2,549	N/a	239	121.69
1990	7.455	20,640	225.14	240	2,174	1,609	176	96.45
1991	6.005	18,698	178.29	181	1,730	1,452	149	70.85
1992	5.670	18,130	165.91	163	1,685	1,376	130	61.18
1993	6.019	13,859	174.86	154	1,808	1,371	143	61.33
1994	7.188	13,969	202.54	173	2,087	2,023	168	76.11
1995	6.875	12,706	186.48	156	1,886	1,649	143	105.45
1996	6.683	12,385	179.31	181	1,875	1,516	148	92.94
1997	6.150	11,110	197.93	186	2,000	1,385	158	75.61
1998	6.856	11,221	273.42	226	3,103	1,579	180	85.20
1999	6.317	10,729	234.64	186	2,458	1,508	176	72.00
2000	5.796	10,290	232.46	168	2,169	1,427	190	61.69
2001	4.975	9,202	223.58	169	2,100	1,253	170	50.57
2002	5.154	9,426	226.12	185	2,084	1,329	167	52.38
2003	5.346	9,314	227.53	182	2,034	1,394	146	59.38
2004	7.106	11,697	292.95	232	2,576	1,829	179	80.97
2005	7.547	11,725	307.72	260	2,461	1,953	192	82.57
2006	11.549	17,843	437.51	432	3,545	2,958	296	125.88

*** Derived from the actual prices shown above using consumer price indices.

Appendix 3

Silver Prices in US$ per ounce

	London Silver Market - Spot			Comex Spot Settlement		
	High	Low	Average	High	Low	Average
1981	16.3030	8.0300	10.4869	16.2900	7.9850	10.5014
1982	11.1100	4.9010	7.9219	11.2100	4.9800	7.9311
1983	14.6680	8.3700	11.4301	14.7150	8.4000	11.4340
1984	10.1100	6.2200	8.1446	10.0640	6.2950	8.1585
1985	6.7500	5.4500	6.1319	6.8350	5.5250	6.1459
1986	6.3100	4.8530	5.4645	6.2850	4.8540	5.4653
1987	10.9250	5.3600	7.0156	9.6600	5.3790	7.0198
1988	7.8215	6.0500	6.5324	7.8270	5.9980	6.5335
1989	6.2100	5.0450	5.4999	6.1940	5.0300	5.4931
1990	5.3560	3.9500	4.8316	5.3320	3.9370	4.8174
1991	4.5710	3.5475	4.0566	4.5450	3.5080	4.0355
1992	4.3350	3.6475	3.9464	4.3180	3.6400	3.9334
1993	5.4200	3.5600	4.3130	5.4430	3.5230	4.3026
1994	5.7475	4.6400	5.2851	5.7810	4.5730	5.2808
1995	6.0375	4.4160	5.1971	6.1020	4.3750	5.1850
1996	5.8275	4.7100	5.1995	5.8190	4.6760	5.1783
1997	6.2675	4.2235	4.8972	6.3070	4.1550	4.8716
1998	7.8100	4.6900	5.5442	7.2600	4.6180	5.4894
1999	5.7900	4.8800	5.2198	5.7600	4.8720	5.2184
2000	5.4475	4.5700	4.9514	5.5470	4.5630	4.9691
2001	4.8200	4.0500	4.3696	4.8570	4.0280	4.3594
2002	5.0975	4.2350	4.5990	5.1250	4.2230	4.6007
2003	5.9650	4.3700	4.8787	5.9930	4.3460	4.8958
2004	8.2900	5.4950	6.6578	8.2110	5.5140	6.6871
2005	9.2250	6.3900	7.3115	9.0000	6.4270	7.3223
2006	14.9400	8.8300	11.5492	14.8460	8.8090	11.5398

US Prices in 2006

Comex Settlement

US$ per ounce	High	Low	Average
January	9.8500	8.8090	9.1794
February	9.8440	9.1000	9.5177
March	11.6180	9.7100	10.3981
April	14.5220	11.1750	12.5217
May	14.8460	12.2770	13.3421
June	12.2450	9.5950	10.6907
July	11.5070	10.4550	11.1625
August	12.9000	11.7400	12.2524
September	13.0650	10.7600	11.6370
October	12.2500	10.7950	11.6109
November	13.9250	12.4170	12.9644
December	14.0610	12.3580	13.2577

Leasing Rates in 2006

Monthly Averages

	3-month	6-month	12-month
January	1.24%	1.57%	2.20%
February	2.26%	2.99%	3.83%
March	3.15%	3.96%	4.70%
April	2.56%	3.83%	4.98%
May	4.29%	4.62%	6.33%
June	2.65%	3.72%	4.98%
July	2.59%	2.95%	3.90%
August	0.38%	1.22%	2.33%
September	0.29%	1.02%	2.04%
October	0.25%	0.71%	1.51%
November	0.17%	0.35%	1.07%
December	0.42%	0.73%	1.34%

Appendix 4

Leading Primary Silver Mines

Rank	Mine	Country	Company	2005	2006
				Moz	Moz
1	Fresnillo (Proaño)	Mexico	Industrias Peñoles SA de CV	33.87	33.49
2	Cannington*	Australia	BHP Billiton	46.22	29.17
3	Dukat	Russia	OJSC Polymetal	13.89	12.65
4	Uchucchacua	Peru	Compañia de Minas Buenaventura SA	10.21	9.69
5	Greens Creek**	United States	Kennecott Minerals/Hecla Mining Co	9.66	8.87
6	Imiter	Morocco	Société Métallurgique d'Imiter	5.82	5.98
7	Rochester	United States	Coeur d'Alene Mines	5.72	5.11
8	Arcata	Peru	Hochschild Mining	4.27	4.75
9	Tayahua***	Mexico	Grupo Carso	4.30	4.30
10	Selene	Peru	Hochschild Mining	3.34	4.16
11	Huaron	Peru	Pan American Silver Corp	3.69	3.66
12	La Colorada	Mexico	Pan American Silver Corp	3.09	3.49
13	Morococha	Peru	Pan American Silver Corp	3.09	3.30
14	Lucky Friday	United States	Hecla Mining Co	2.42	2.87
15	Martha	Argentina	Coeur d'Alene Mines	2.09	2.71

*gross production estimate based on reported payable metal; **historically a silver mine, Greens Creek's primary revenue stream switched to zinc in 2006. GFMS regard this as a short term anomaly and as such have maintained its classification as a primary silver mine; *** estimate.

Silver Mine Production by Source Metal

(million ounces)

	2003	2004	2005	2006
Primary				
Mexico	41.4	41.2	44.0	42.7
Peru	28.8	30.8	31.2	33.9
Australia	38.2	45.9	48.7	30.7
Other	48.4	50.9	55.2	54.0
Total	**156.8**	**168.8**	**179.0**	**161.4**
Gold				
Chile	23.3	20.4	19.2	23.4
Mexico	8.6	8.0	12.8	16.0
Canada	23.5	23.7	16.9	13.8
Other	26.1	28.5	32.5	32.7
Total	**81.5**	**80.7**	**81.3**	**85.9**
Copper				
Poland	43.7	43.2	40.0	39.9
Chile	18.7	23.1	22.2	25.8
Kazakhstan	19.5	17.7	20.5	21.5
Other	76.1	78.9	85.2	82.9
Total	**157.9**	**162.9**	**167.9**	**170.1**
Lead/Zinc				
China	38.3	42.7	46.1	54.4
Peru	46.3	44.8	45.3	49.2
Australia	20.8	24.4	27.4	23.8
Other	92.3	88.5	84.8	84.1
Total	**197.7**	**200.5**	**203.5**	**211.5**
Other	**6.8**	**9.3**	**14.0**	**17.2**
World Total	**600.7**	**622.2**	**645.7**	**646.1**

Silver Mine Production by Main Region and Source Metal

(million ounces)

	2003	2004	2005	2006
North America				
primary	64.7	62.2	63.8	61.0
lead/zinc	37.9	37.6	34.2	33.7
copper	20.8	22.4	23.7	21.8
gold	36.2	35.9	34.0	33.7
other	3.8	6.3	10.8	14.0
Total	**163.5**	**164.4**	**166.5**	**164.2**
Central & South America				
primary	30.3	32.5	36.3	39.4
lead/zinc	62.6	59.6	58.3	64.2
copper	32.7	38.9	39.6	44.6
gold	32.8	31.9	33.0	38.6
other	0.3	0.3	0.2	0.3
Total	**158.8**	**163.1**	**167.4**	**187.1**
Asia & CIS				
primary	18.6	22.9	24.4	24.3
lead/zinc	63.9	67.1	71.4	77.6
copper	53.5	51.4	56.5	55.2
gold	9.6	10.1	11.3	10.7
other	2.4	2.4	2.4	2.4
Total	**147.9**	**153.9**	**166.0**	**170.2**
Rest of the World				
primary	43.2	51.2	54.5	36.7
lead/zinc	33.3	36.2	39.6	36.0
copper	50.9	50.2	48.2	48.5
gold	2.9	2.8	3.1	2.8
other	0.2	0.3	0.4	0.4
Total	**130.5**	**140.8**	**145.8**	**124.5**
World Total	**600.7**	**622.2**	**645.7**	**646.1**

Appendix 5

Comex Futures and Options Turnover and Open Interest, and London Bullion Market (LBM) Turnover

	Comex Number of Contracts				LBM Clearing Turnover[3]		
	Futures		Options		Ounces transferred (millions)	Value (US$bn)	Number of transfers
	Turnover[1]	Open Interest[2]	Turnover[1]	Open Interest[2]			
Jan-05	285,449	96,665	78,701	85,481	76.9	0.5	272
Feb	513,617	101,638	95,885	65,973	77.5	0.5	299
Mar	370,338	99,251	83,178	79,260	93.8	0.7	321
Apr	488,832	107,264	72,391	62,464	87.6	0.6	299
May	392,156	113,358	67,998	80,544	152.1	1.1	357
Jun	621,647	115,021	88,041	65,376	123.4	0.9	355
Jul	334,903	124,378	74,055	71,103	95.1	0.7	289
Aug	600,961	117,356	71,351	61,294	104.4	0.7	318
Sep	455,033	126,796	111,708	80,686	126.8	0.9	356
Oct	424,972	138,138	139,371	104,293	124.7	1.0	349
Nov	652,917	140,909	103,995	79,106	132.0	1.0	359
Dec	398,526	131,229	145,115	105,533	131.3	1.1	403
Jan-06	495,649	133,259	197,390	152,624	124.5	1.1	410
Feb	624,491	127,839	138,682	116,712	152.9	1.5	457
Mar	562,330	139,615	228,004	130,442	187.9	2.0	506
Apr	807,269	116,254	269,800	121,244	238.1	3.0	693
May	513,822	110,238	173,275	144,622	205.7	2.8	561
Jun	508,746	97,874	108,169	104,758	164.3	1.8	442
Jul	255,777	99,142	65,874	113,906	169.5	1.9	380
Aug	452,551	108,854	104,647	98,482	94.7	1.2	337
Sep	268,393	99,007	93,191	110,790	110.4	1.3	427
Oct	244,152	110,237	82,548	122,310	98.4	1.1	361
Nov	424,771	106,667	90,338	77,877	108.8	1.4	381
Dec	275,112	101,155	95,041	93,159	107.7	1.4	406

1 Monthly total; 2 Month-end; 3 Daily average; Source: LBMA, Comex

Monthly ETF Volume and Holdings

Moz	Total Volume	End-month Holdings	Net Investment
May-06	199.4	69.0	69.0
Jun	130.8	83.0	14.0
Jul	63.7	92.4	9.5
Aug	70.1	100.4	8.0
Sep	97.8	104.3	4.0
Oct	69.8	104.8	0.5
Nov	68.8	109.7	4.9
Dec	28.3	121.1	11.4
Jan-07	57.0	117.1	-4.0
Feb	23.4	126.0	8.9
Mar	23.9	132.0	5.9
Apr	17.7	134.9	2.9